Form 3160-3 (August 1999)

## UNITED STATES DEPARTMENT OF THE INTERIOR

FORM APPROVED OMB No. 1004-0136 Expires November 30, 2000

5. Lease Serial No.

UTU	-01	19	35
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BUREAU OF LAND MA	UTU-01195				
APPLICATION FOR PERMIT TO	6. If Indian, Allottee of	r Tribe Name			
1a. Type of Work: X DRILL RE	7. If Unit or CA Agree UNIT #891008900	Α			
b. Type of Well: Oil Well X Gas Well Other	☐ Si	ngle Zone	Multiple Zone	8. Lease Name and W. NBU 1022-5C-	4
2. Name of Operator KERR McGEE OIL & GAS ONSHORE LP				9. API Well No. 43.047	-38522
3A. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. (435) 781-	(include area c	ode)	10. Field and Pool, or I	Exploratory
4. Location of Well (Report location clearly and in accordance with At surface NENW LOT 3, 1269'FNL, 2606'	FWL 6312	210 X	9.991785 109.463150	11. Sec., T., R., M., or SEC. 5, T10S, R2	Blk, and Survey or Area
At proposed prod. Zone  14. Distance in miles and direction from nearest town or post office  24.1 MILE SOUTHEAST OF OURAY, UTAH		065/		12. County or Parish UINTAH	13. State UTAH
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Ac	res in lease	17. Spacing Unit de <b>20.00</b>	dicated to this well	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  REFER TO TOPO C	8. Distance from proposed location* to nearest well, drilling, completed,  REFER TO 19. Proposed Depth 20. BLM/BIA B				
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5188'UNGRADED GL	22. Approxim	ate date work w	rill start*	23. Estimated duration	
	24. At	tachments			
The following, completed in accordance with the requirements of On	shore Oil and G	as Order No. 1,	shall be attached to the	s form:	
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest System I SUPO shall be filed with the appropriate Forest Service Office.</li> </ol>	Lands, the	Item 20 al 5. Operator c	oove). ertification. site specific informati	nless covered by an existing on and/or plans as may be	
25. Signature		(Printed/Typed		i Di	ate 8/23/2006
Title  REGULATORY ANALYST					
Approved by (Signature) Title	<u> </u>		Y G. HILL ITAL MANAGER	D	nte <u>D8-29-06</u>
Application approval does not warrant or certify that the applicant he operations thereon.  Conditions of approval, if any, are attached.  Title 18 U.S.C. Section 1001and Title 43 U.S.C. Section 1212, make					

\*(Instructions on reverse)

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED AUG 2 8 2006

#### Kerr McGee Oil & Gas Onshore LP T10S, R22E, S.L.B.&M. Well location, NBU #1022-5C-4, located as shown Brass Cap 1977 in LOT 3 of Section 5, T10S, R22E, S.L.B.&M. Brass S89°59'17"W - 2647.30' (Meas.) S89'56'37"W - 2647.47' (Meas.) Cap Uintah County, Utah. Brass BASIS OF ELEVATION (Meas. TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 LOT 1 LOT 4 LOT 3 LOT 2 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG 52, PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 0 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE 2661. UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET. -NBU #1022-5C-4 2606 Elev. Ungraded Ground = 5188 BASIS OF BEARINGS NO0.35'45"W NOO\*44'34"W BASIS OF BEARINGS IS A G.P.S. OBSERVATION. 1991 Alum. Cap. 0.5' High, Pile of Stones 1991 Alum. Cap 0.5' High, Pile of Stones (Meas. 49, 2629. SCALE VOO\*34'26"W THIS IS TO CERTIFY THAT THE FIELD NOTES OF ACTUAL SUR SUPERVISION AND THAT THE BEST OF MY KNOWLEDGE AN 1991 Brass Cap, 1991 Alum. Cap 1991 Alum. Cop 0.4' High, Pile of Pile of Stones Pile of Stones Stones, Steel Post N89°59'51"W - 2644.51' (Meas.) S89°55'13"W - 2637.18' (Meas.) NOTE: UINTAH ENGINEERING & LAND SURVEYING FOOTAGES FOR PROPOSED WELL 85 SOUTH 200 EAST - VERNAL, UTAH 84078 HEAD ARE CALCULATED PARALLEL (NAD 83) TO SECTION LINES (435) 789-1017 LATITUDE = 39.58.54.37" (39.981769) SCALE DATE SURVEYED: DATE DRAWN: LONGITUDE = $109^{\circ}27'50.18"$ (109.463939) 1" = 1000'04-11-06 04-20-06 LEGEND: PARTY REFERENCES (NAD 27) P.J. J.A. S.L. = PROPOSED WELL HEAD. G.L.O. PLAT LATITUDE = 39.58.54.50" (39.981806) WEATHER FILE LONGITUDE = $109^{\circ}27'47.72''$ (109.463256) = SECTION CORNERS LOCATED. HOT Kerr McGee Oil & Gas Onshore LP

## NBU #1022-5C-4 SENENW LOT 3, SEC 5-T10S-R22E UINTAH COUNTY, UTAH UTU-01195

## **ONSHORE ORDER NO. 1**

#### DRILLING PROGRAM

## 1. Estimated Tops of Important Geologic Markers:

Green River Top of Birds Nest Water Mahogany Wasatch Mesaverde	0- Surface 1327' 1664' 2298' 4531' 7040'
WI V 02	7911 8567'
IVI V LI	9170'

## 2. Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Substance	<u>Formation</u>	<u>Depth</u>
Gas Gas Gas Gas Water Other Minerals	Green River Top of Birds Nest Water Mahogany Wasatch Mesaverde MVU2 MVL1 N/A N/A	1327' 1664' 2298' 4531' 7040' 7911' 8567'
Other Minerals	INII	

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

## 4. Proposed Casing & Cementing Program:

Please see the Natural Buttes Unit SOP.

## 5. <u>Drilling Fluids Program:</u>

Please see the Natural Buttes Unit SOP.

#### 6. <u>Evaluation Program</u>:

Please see the Natural Buttes Unit SOP.

## 7. Abnormal Conditions:

Maximum anticipated bottomhole pressure calculated at 9170' TD, approximately equals 5685 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3668 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

#### 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

#### 9. Variances:

Please see Natural Buttes Unit SOP.

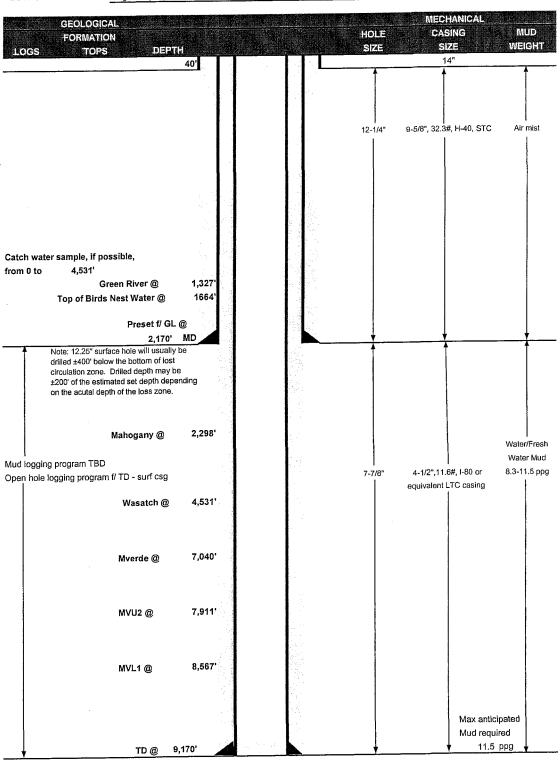
#### 10. Other Information:

Please see Natural Buttes Unit SOP.



## KERR-McGEE OIL & GAS ONSHORE LP DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	August 23, 2006	
WELL NAME	NBU 1022-5C-4	TD	9,170' MD/TVD	
FIELD Natural Butte	s COUNTY Uintah STATE	Utah E	LEVATION 5,188'	GL KB 5,203'
SURFACE LOCATION	SENENW SECTION 5, T10S, R22E 1269'FM	NL, 2606'FWL		BHL Straight Hole
	Latitude: 39.981769 Longitude: 109	9.463939		
OBJECTIVE ZONE(S)	Wasatch/Mesaverde	,		
ADDITIONAL INFO	Regulatory Agencies: BLM (SURF & MINER	ALS), UDOGM,	Tri-County Health Dept.	





## KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

#### CASING PROGRAM

								CONTRACTOR OF THE PARTY OF THE	DESIGN FACT	CARLO CONTRACTOR CONTR
	SIZE	IN	TERV	<b>AL</b>	WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"		0-40'					2270	1370	254000
SURFACE	9-5/8"	0	to	2170	32.30	H-40	STC	0.65****** 7780	1.35 6350	4.14 201000
PRODUCTION	4-1/2"	0	to	9170	11.60	1-80	LTC	2.24	1.16	2.17

- 1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)
- 2) MASP (Prod Casing) = Pore Pressure at TD (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD =

11.5 ppg)

.22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Burst SF is low but csg is much stronger than formation at 2000'. EMW @ 2000' for 2270# is 21.8 ppg or 1.13 psi/ft

#### CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	ALL STORY OF THE STORY	Premium cmt + 2% CaCl	215	60%	15.60	1.18
Option 1		hartining	+ .25 pps flocele				
•	OUT CMT (1)	200	20 gals sodium silicate + Premium cmt	50		15.60	1.18
			+ 2% CaCl + .25 pps flocele				6 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
TOP	OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE		11.50	NOTE: If well will circulate water to su	ırface, op	tion 2 will b	e utilized	
Option 2	LEAD	1500	Prem cmt + 16% Gel + 10 pps gilsonite	170	35%	11.00	3.82
Option 2		34	+.25 pps Flocele + 3% salt BWOC				
	TAIL	500	Premium cmt + 2% CaCl	180	35%	15.60	1.18
		t all the	+ .25 pps flocele				
т	OP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
				1 - 1 <u>1   1   1   1   1   1   1   1   1   </u>			
PRODUCTION	LEAD	4,030'	Premium Lite II + 3% KCI + 0.25 pps	440	60%	11.00	3.38
111000071			celloflake + 5 pps gilsonite + 10% gel				
	l		+ 0.5% extender			1	
	TAIL	5,140'	50/50 Poz/G + 10% salt + 2% gel	1440	60%	14.30	1.31
			+.1% R-3				

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

#### FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow
	spring centralizers.

#### ADDITIONAL INFORMATION

DRILLING SUPERINTENDENT:

Randy Bayne

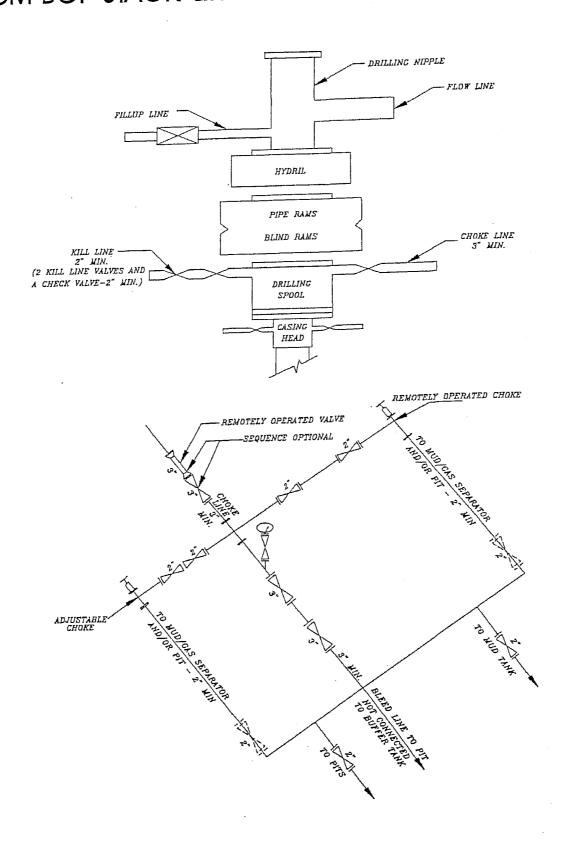
	Test casing head to 750 psi af	er installing. Test surface casing to 1,500 psi prior to drilling out.
	BOPE: 11" 5M with one annul	ar and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder &
	tour sheet. Function test rams	on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper
•	& lower kelly valves.	
	Drop Totco surveys every 200	D'. Maximum allowable hole angle is 5 degrees.
	Most rigs have PVT Systems f	or mud monitoring. If no PVT is available, visual monitoring will be utililzed.
ILLING	ENGINEER:	DATE:
		Brad Laney

NBU1022-5C-4 APD.xls

DATE:

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

# 5M BOP STACK and CHOKE MANIFOLD SYSTEM



### NBU #1022-5C-4 SENENW LOT 3, SEC 5-T10S-R22E UINTAH COUNTY, UTAH UTU-01195

#### ONSHORE ORDER NO. 1

## MULTI-POINT SURFACE USE & OPERATIONS PLAN

#### 1. Existing Roads:

Refer to the attached location directions.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

#### 2. Planned Access Roads:

Please see the Natural Buttes Unit Standard Operating Procedure (SOP).

Approximately 0.1 +/- miles of access road is proposed. Please refer to the attached Topo Map B.

## 3. <u>Location of Existing Wells Within a 1-Mile Radius</u>:

Please refer to Topo Map C.

## 4. <u>Location of Existing & Proposed Facilities:</u>

Please see the Natural Buttes Unit SOP.

Approximately 483' +/- of 4" pipeline is proposed to tie-in to an existing pipeline is proposed. Refer to Topo Map D.

## Variances to Best Management Practices (BMPs) Requested:

The pipeline shall be installed on surface within the access corridor for the well location. As a Best Management Practice (BMP), the pipeline would be buried within the access road corridor if possible. The construction of pipelines requires the corridor of 30 feet.

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Carlsbad Canyon Brown (2.5Y 6/2), a non-reflective earthtone.

## 5. <u>Location and Type of Water Supply:</u>

Please see the Natural Buttes SOP.

#### 6. Source of Construction Materials:

Please see the Natural Buttes SOP.

#### 7. Methods of Handling Waste Materials:

Please see the Natural Buttes SOP.

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec. 35, T9S R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E (Request is in lieu of filing Form 3160-5, after initial production).

#### 8. Ancillary Facilities:

Please see the Natural Buttes SOP.

## 9. Well Site Layout: (See Location Layout Diagram)

The attached Location Layout Diagram describes drill pad cross-sections, cuts and fills, and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s), and surface material stockpile(s).

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

A 20 mil reserve pit liner with felt will be used. As discussed at the on-site inspection.

Location size may change prior to the drilling of the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling rig. The location will be resurveyed and a form 3160-5 will be submitted.

## 10. Plans for Reclamation of the Surface:

Please see the Natural Buttes SOP.

When the pit is backfilled, the topsoil pile shall be spread on the location up to the rig anchor points. The location will be reshaped to the original contour to the extent possible. The following seed mixture will be used to reclaim the surface for interim reclamation using appropriate reclamation methods. A total of 12 lbs/acre will be used if the seeds are drilled (24 lbs/acre if the seeds are broadcast). The per acre requirements for *drilled* seed are:

Galletta Grass

20 lbs.

Operator shall call the BLM for the seed mixture when final reclamation occurs.

#### 11. Surface Ownership:

The well pad and access road are located on lands owned by:

United States of America Bureau of Land Management 170 South 500 East Vernal, UT 84078 (435)781-4400

#### 12. Other Information:

A Class III Archaeological Survey Report No. 06-164, completed on May 3, 2006 for the well location; also, is submitted along with the Application for Permit to Drill. The paleontological survey have been performed and will be filed when received by our office.

This location is not within 460' from the boundary of the Natural Buttes Unit, nor is it within 460' of any non-committed tract lying with the boundaries of the unit.

## 13. <u>Lessee's or Operator's Representative & Certification</u>:

Sheila Ucphego Regulatory Analyst Kerr-McGee Oil & Gas Onshore LP 1368 South 1200 East Vernal, UT 84078 (435) 781-7024 Randy Bayne Drilling Manager Kerr-McGee Oil & Gas Onshore LP 1368 South 1200 East Vernal, UT 84078 (435) 781-7018

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under the terms and conditions of the lease for the operations conducted upon leased lands.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Bond coverage pursuant to 43 CFR 3104 for lease activities is being provided by BLM Nationwide Bold #WY-2357.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Sheila Upchego Bate

## Kerr-McGee Oil & Gas Onshore LP NBU #1022-5C-4 SECTION 5, T10S, R22E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 6.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN LEFT AND PROCEED IN A SOUTHEASTERLY, THEN EASTERLY DIRECTION APPROXIMATELY 5.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN LEFT AND PROCEED IN A NORTHWESTERLY DIRECTION APPROXIMATELY 0.3 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 3.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 0.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHWEST; TURN RIGHT AND PROCEED IN A SOUTHWESTERLY, THEN SOUTHEASTERLY DIRECTION APPROXIMATELY 6.1 MILES JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHTHEAST; A NORTHEASTERLY DIRECTION AND PROCEED IN TURN LEFT APPROXIMATELY 1.0 MILES TO THE PROPOSED ACCESS ROAD TO THE NORTHEAST; FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 0.1 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 55.7 MILES.

## Kerr-McGee Oil & Gas Onshore LP

NBU #1022-5C-4 LOCATED IN UINTAH COUNTY, UTAH SECTION 5, T10S, R22E, S.L.B.&M.

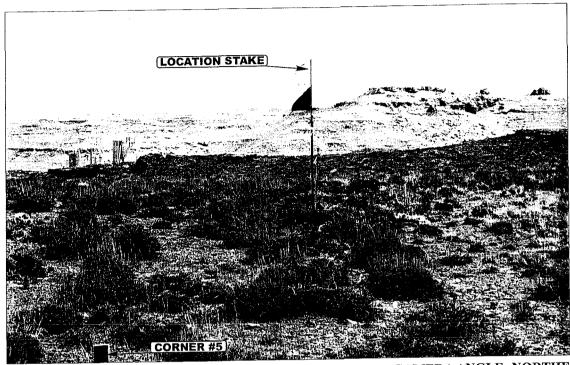


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY

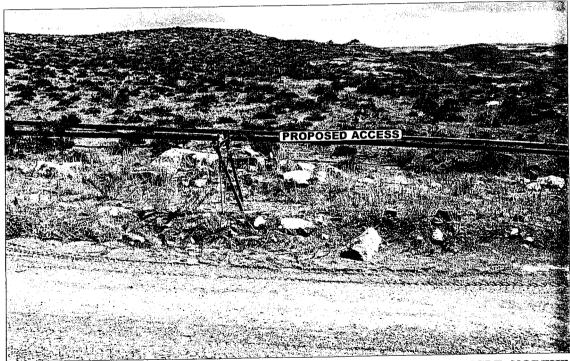


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHEASTERLY



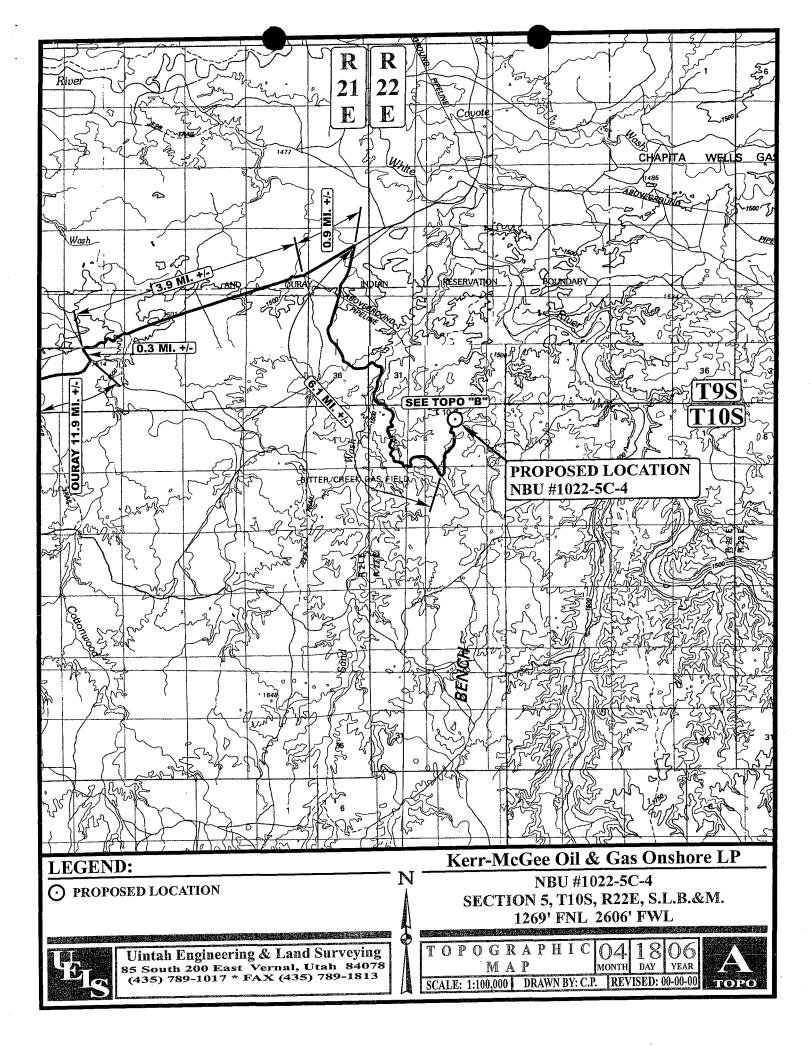
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

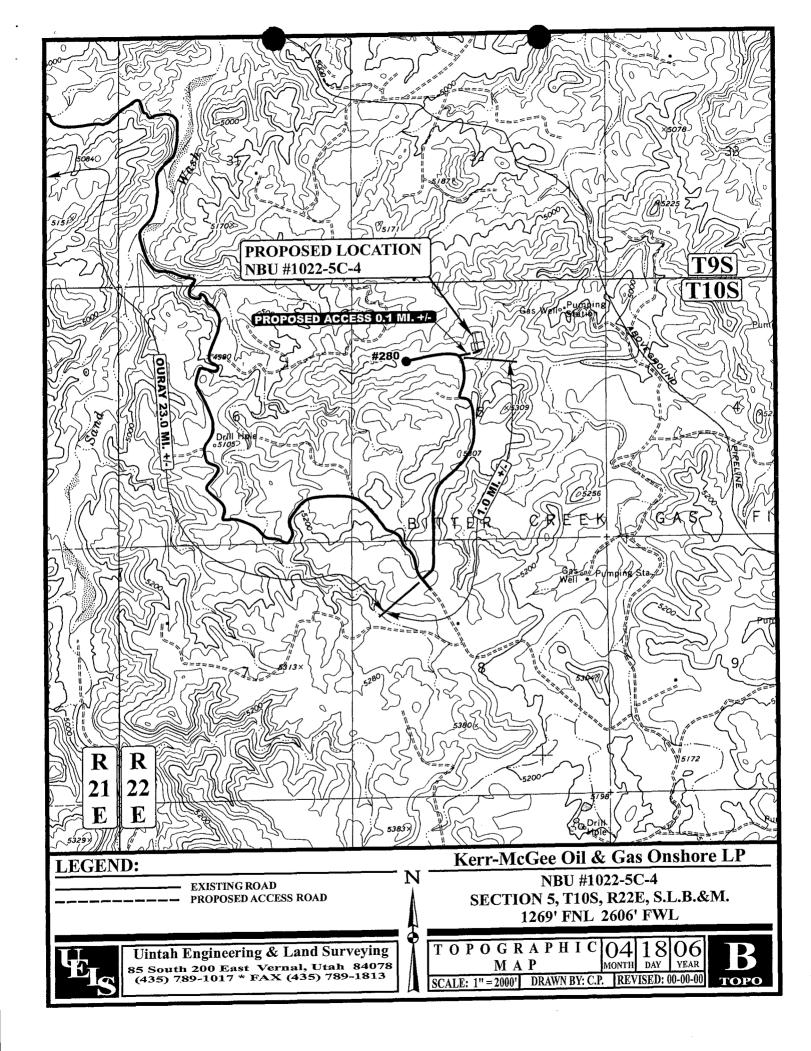
LOCATION PHOTOS

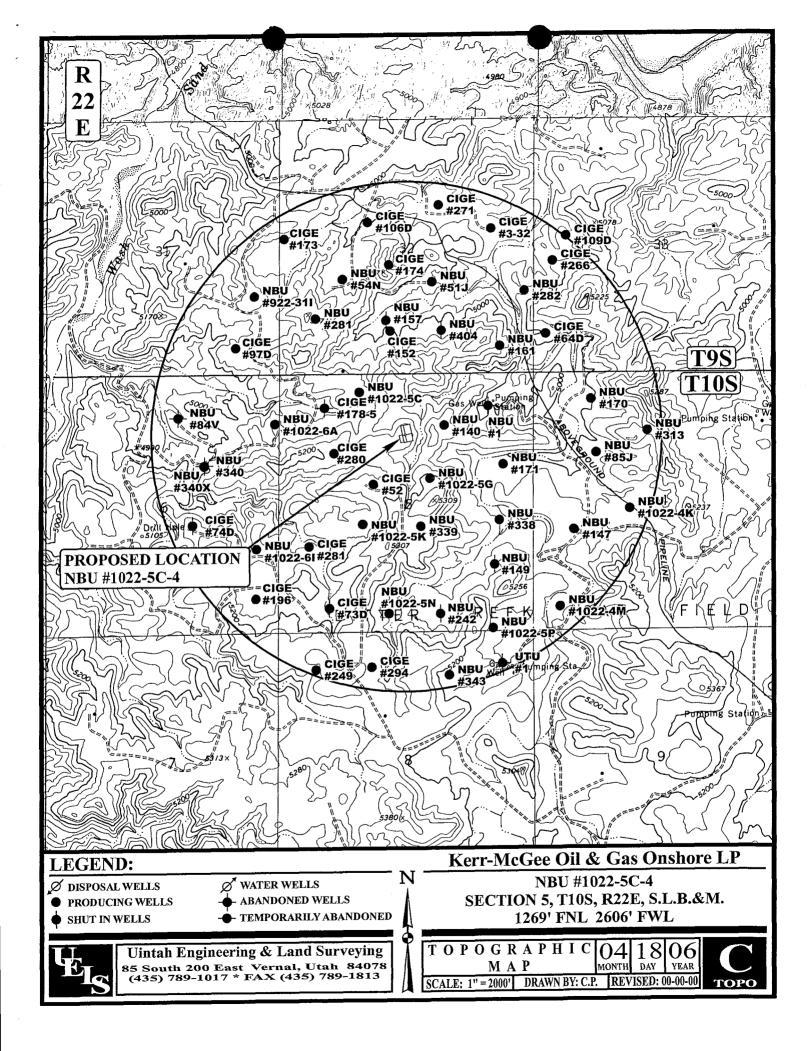
04 18 06 MONTH DAY YEAR

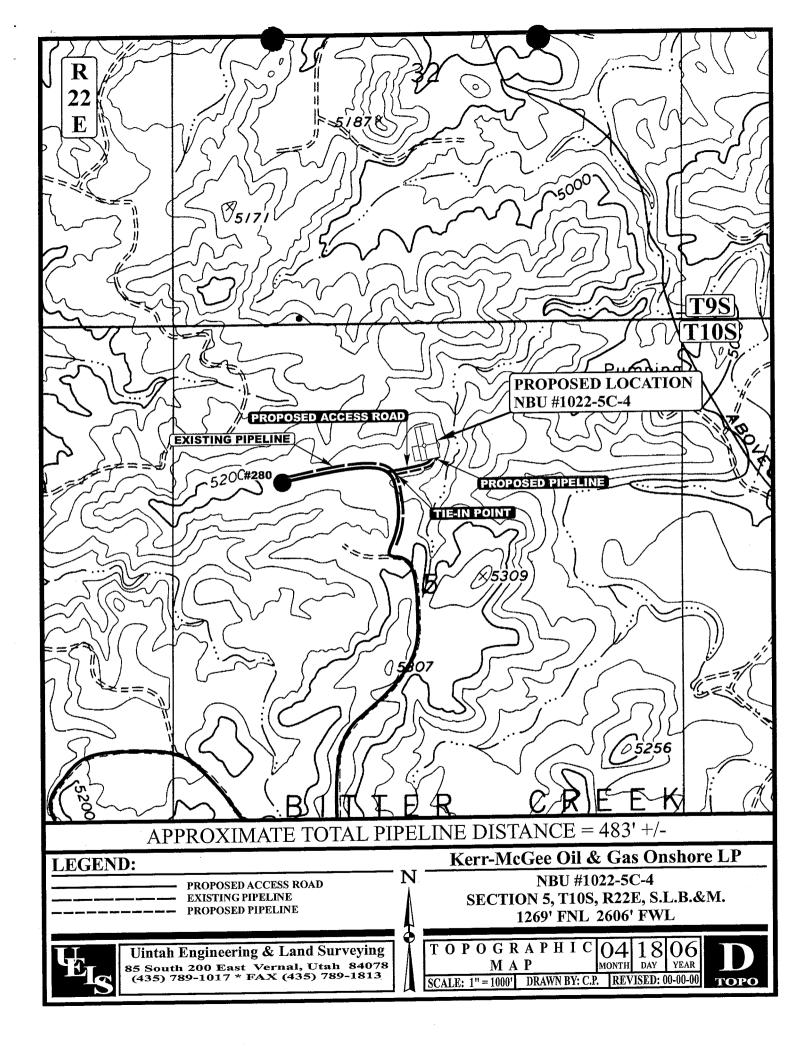
РНОТО

TAKEN BY: P.J. DRAWN BY: C.P. REVISED: 00-00-00









## Kerr-McGee Oil & Gas Onshore LP

NBU #1022-5C-4
PIPELINE ALIGNMENT
LOCATED IN UINTAH COUNTY, UTAH
SECTION 5, T10S, R22E, S.L.B.&M.

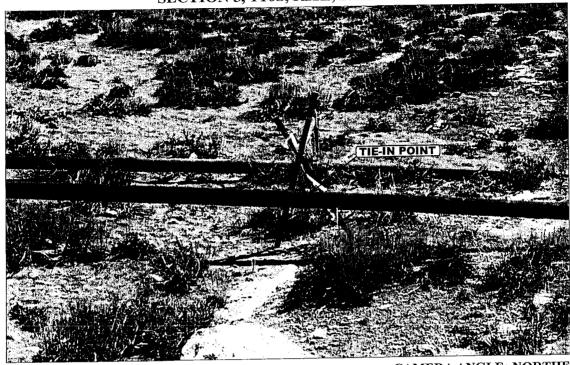


PHOTO: VIEW FROM TIE-IN POINT

CAMERA ANGLE: NORTHEASTERLY

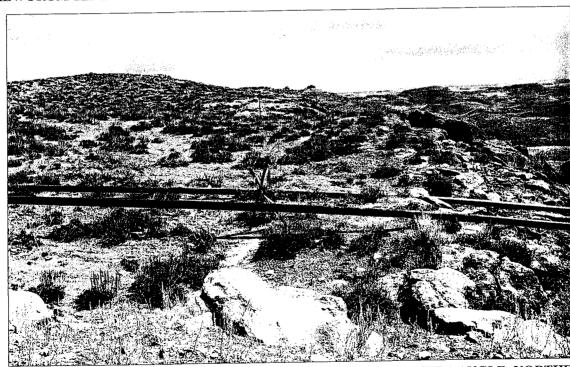


PHOTO: VIEW OF PIPELINE AT LOCATION

CAMERA ANGLE: NORTHEASTERLY



Uintah Engineering & Land Surveying 85 South 200 East Vernal, Utah 84078 435-789-1017 uels@uelsinc.com

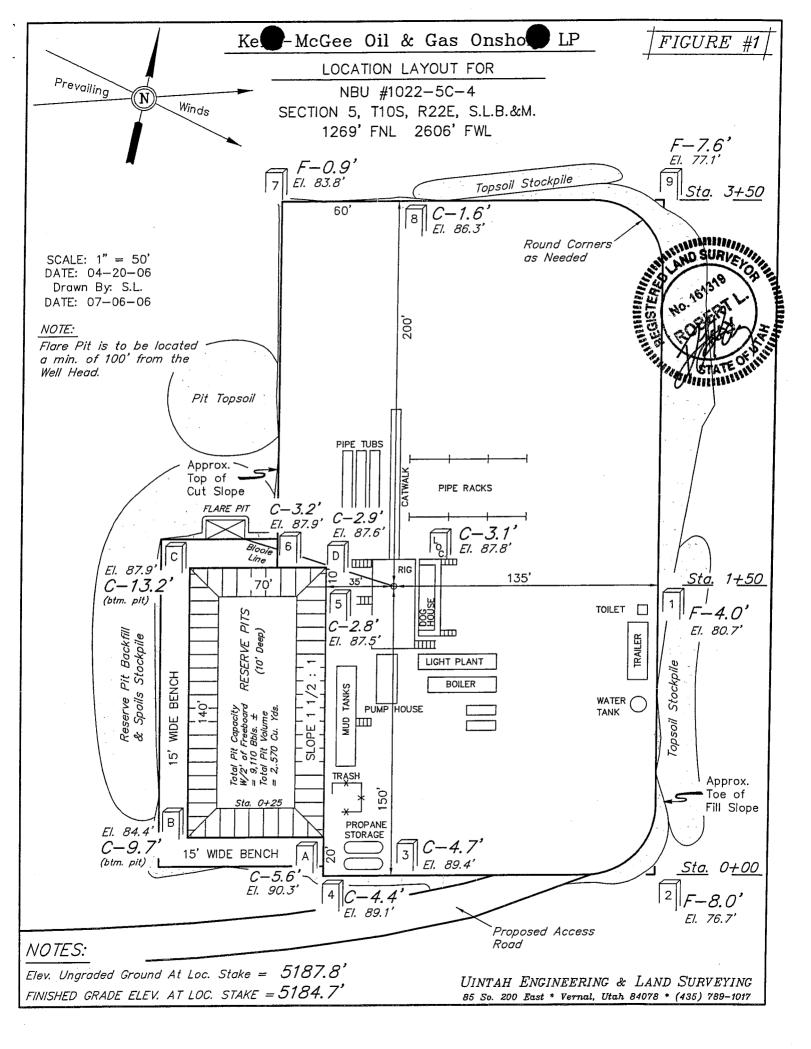
PIPELINE PHOTOS

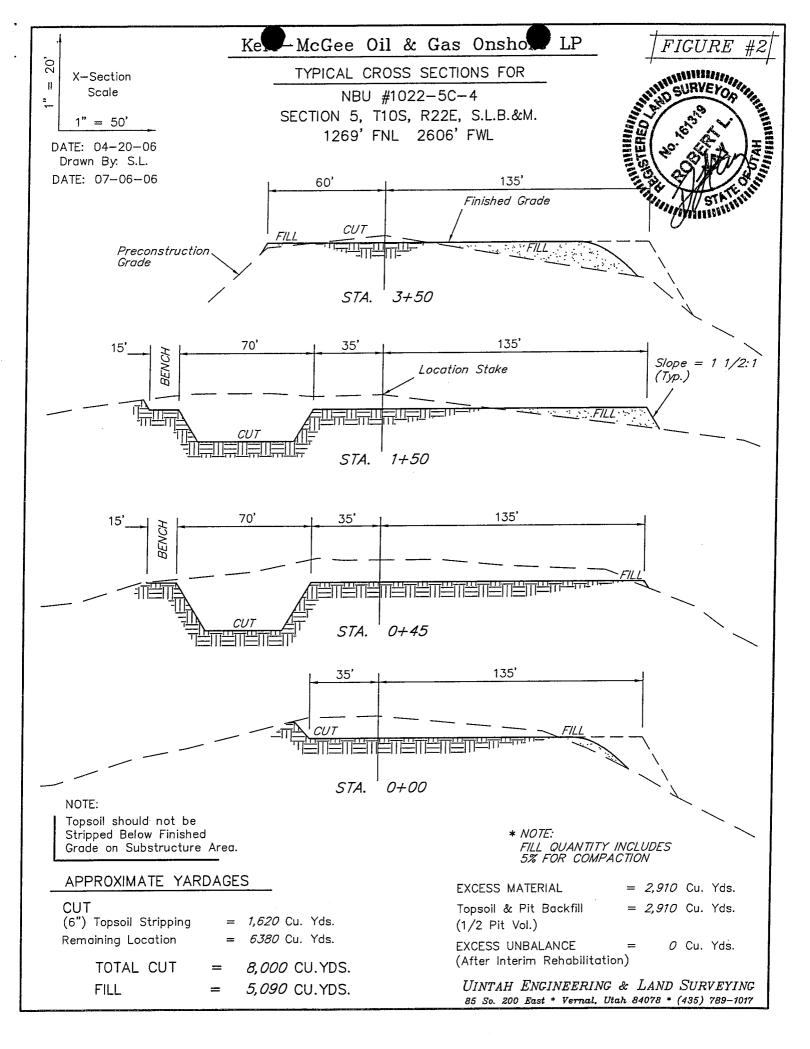
 $\begin{array}{c|c} 04 & 18 & 06 \\ \text{month} & \text{day} & \text{year} \end{array}$ 

**PHOTO** 

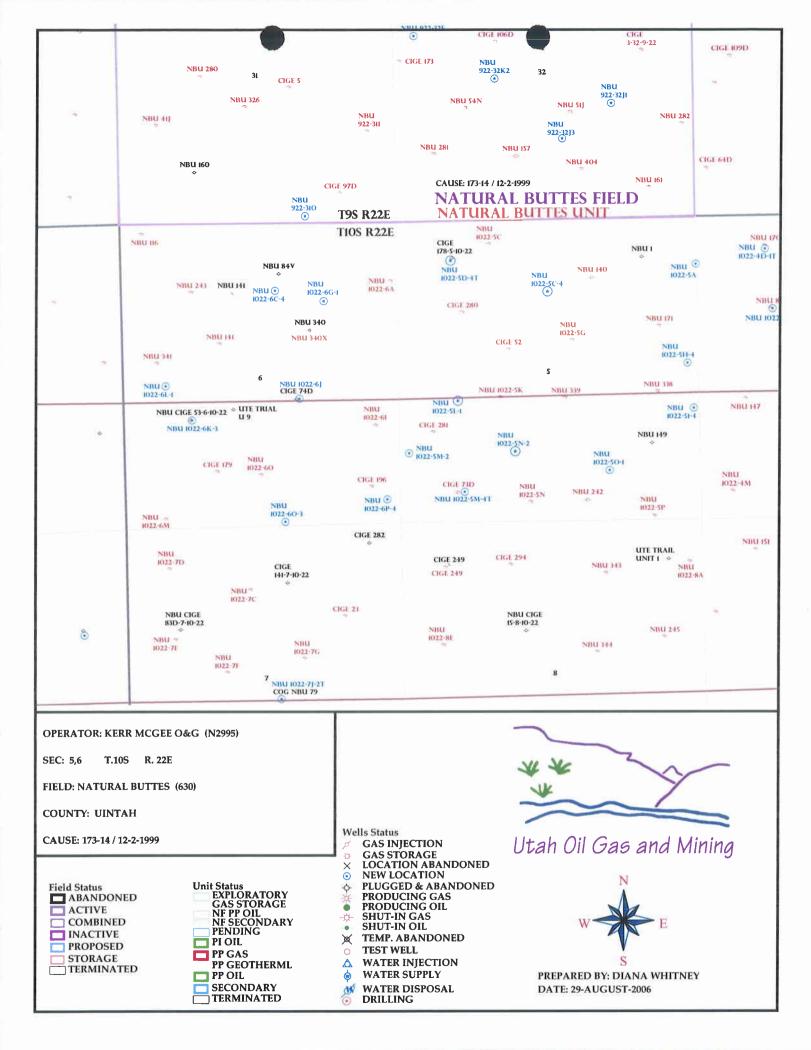
TAKEN BY: P.J. DRAWN BY: C.P.

REVISED: 00-00-00





APD RECEIVED: 08/28/2006	API NO. ASSIGNED: 43-047-38522			
PERATOR: KERR-MCGEE OIL & GAS ( N2995 ) PHONE NUMBER: 435-781-7024  ONTACT: SHEILA UPCHEGO				
PROPOSED LOCATION:	INSPECT LOCATN BY: / /			
NESW 05 100S 220E SURFACE: 1269 FNL 2606 FWL	Tech Review Initials Date			
BOTTOM: 1269 FNL 2606 FWL	Engineering			
COUNTY: UINTAH	Geology			
LATITUDE: 39.98179 LONGITUDE: -109.4632  UTM SURF EASTINGS: 631226 NORTHINGS: 4426	Surface			
FIELD NAME: NATURAL BUTTES (630  LEASE TYPE: 1 - Federal  LEASE NUMBER: UTU-01195  SURFACE OWNER: 1 - Federal				
Plat  Bond: Fed[1] Ind[] Sta[] Fee[]  (No. WY-2357 )  Potash (Y/N)  Oil Shale 190-5 (B) or 190-3 or 190-13  Water Permit  (No. 43-8496 )  RDCC Review (Y/N)  (Date:)  Multiple Fee Surf Agreement (Y/N)  Intent to Commingle (Y/N)	LOCATION AND SITING:  R649-2-3.  Unit: NATURAL BUTTES  R649-3-2. General			
COMMENTS: Sop, Several 6	ė,			
STIPULATIONS: 1-leders Appro	INO NE			



## **United States Department of the Interior**

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO: 3160 (UT-922)

August 29, 2006

#### Memorandum

To:

Assistant District Manager Minerals, Vernal District

From:

Michael Coulthard, Petroleum Engineer

Subject:

2006 Plan of Development Natural Buttes Unit Uintah

County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2006 within the Natural Buttes Unit, Uintah County, Utah.

API#

WELL NAME

LOCATION

#### (PZ MesaVerde)

```
43-047-38513 NBU 1022-3M-4T Sec 03 T10S R22E 0639 FSL 0665 FWL
43-047-38514 NBU 1022-4D-1T Sec 04 T10S R22E 0565 FNL 1162 FWL
43-047-38515 NBU 1022-41-4 Sec 04 T10S R22E 1656 FSL 0537 FEL
43-047-38516 NBU 1022-4E-1T Sec 04 T10S R22E 1623 FNL 1289 FWL
43-047-38517 NBU 1022-4J-4T Sec 04 T10S R22E 1385 FSL 1941 FEL
43-047-38511 NBU 922-340-3 Sec 34 T09S R22E 0011 FSL 1433 FEL
43-047-38512 NBU 922-34D-3 Sec 34 T09S R22E 1217 FNL 0162 FWL
43-047-38525 NBU 1022-6G-1 Sec 06 T10S R22E 1372 FNL 1338 FEL
43-047-38526 NBU 1022-6L-1
                           Sec 06 T10S R22E 2451 FSL 0708 FWL
43-047-38527 NBU 1022-6P-4
                           Sec 06 T10S R22E 0413 FSL 0281 FEL
43-047-38528 NBU 1022-6C-4
                           Sec 06 T10S R22E 1178 FNL 2192 FEL
43-047-38518 NBU 1022-5O-1
                           Sec 05 T10S R22E 0873 FSL 1630 FEL
43-047-38519 NBU 1022-5M-2 Sec 05 T10S R22E 1219 FSL 0116 FWL
43-047-38520 NBU 1022-51-4
                           Sec 05 T10S R22E 1955 FSL 0139 FEL
43-047-38521 NBU 1022-5N-2
                           Sec 05 T10S R22E 1228 FSL 1980 FWL
43-047-38522 NBU 1022-5C-4 Sec 05 T10S R22E 1269 FNL 2606 FWL
43-047-38523 NBU 1022-5D-4T Sec 05 T10S R22E 0696 FNL 0894 FWL
43-047-38524 NBU 1022-5L-1 Sec 05 T10S R22E 2132 FSL 0986 FWL
```

This office has no objection to permitting the wells at this time.



#### State of Utah

#### Department of Natural Resources

MICHAEL R. STYLER Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA Division Director



GARY R. HERBERT Lieutenant Governor

August 29, 2006

Kerr McGee Oil & Gas Onshore LP 1368 S 1200 E Vernal, UT 84078

Re: Natural Buttes Unit 1022-5C-4 Well, 1269' FNL, 2606' FWL, NE NW, Sec. 5, T. 10 South, R. 22 East, Uintah County, Utah

#### Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38522.

Sincerely,

Gil Hunt

Associate Director

pab Enclosures

cc: U

**Uintah County Assessor** 

Bureau of Land Management, Vernal District Office

Operator: Kerr McGee Oil & Gas Onshore LP				
Well Name & Number	Natural Buttes U	Jnit 1022-5C-4		
API Number:	43-047-38522			
Lease:	UTU-01195			
Location: <u>NE NW</u>	Sec. <u>5</u>	<b>T.</b> 10 South	<b>R.</b> 22 East	

#### **Conditions of Approval**

#### 1. General

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### 2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

• Contact Dan Jarvis at (801) 538-5338

#### 3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

- 4. In accordance with Order in Cause No. 190-5(b) dated October 28, 1982, the Operator shall comply with requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operator shall ensure that the surface and/or production casing is properly cemented over the entire oil shale interval as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the Division.
- 5. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

Form 3160-5 (August 1999)

#### **UNITED STATES** DEPAI **BUREAU OF LAND MANAGEMENT**

FORM APPROVED OMB No. 1004-0135 spires Inovember 30, 2000

RTMENT OF THE INTERIOR	Expires Inc
TT OP T AND NAANTACENADNE	

SHINDRY	NOTICES	<b>AND REPORTS</b>	ON WELLS
SUITUR	NULUE	WIND UPLOTED	VII IILLU

SUNDRY NOTICES AND REPORTS ON WELLS				1010-01195					
Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.						6. If Indian, A	llotte	e or Tribe Name	
							7. If Unit or C	A/Ag	reement, Name and/or No.
SUBMIT IN TRIPLICATE - Other instructions on reverse side						UNIT #8910089 00A			
1. Type of Well									
Oil Well X Gas Well	Other						8. Well Name and No.		
2. Name of Operator						l	NBU 1022-5C-4		
KERR MCGEE OIL AND GA	AS ONSHORE LP						9. API Well N		
3a. Address		l .	ne No. (includ	de are	ea coo	de)	4304738522		
1368 SOUTH 1200 EAST, V			31-7003				10. Field and Pool, or Exploratory Area		
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description)	)				ļ	NATURAL BUTTES		
1269' FNL, 2606' FWL							11. County or l	Parish	, State
NENW, SEC 5-T10S-R22E	LOT 3						UINTAH, UTAH		
12. CHECK APP	ROPRIATE BOX(ES) TO I	NDICAT	E NATURE	OF	NOT	TICE, RE	EPORT, OR C	THE	IR DATA
TYPE OF SUBMISSION			TY	PE (	OF A	CTION			
Notice of Intent	Acidize	Deep	en	Г	Pro	oduction (	Start/Resume)	П	Water Shut-Off
	Alter Casing	= :	ure Treat	Ē	Rec	clamation	ĺ	ŏ	Well Integrity
Subsequent Report	Casing Repair	New	Construction	Ē	Rec	complete		囡	Other APD EXTENSION
_	Change Plans	Plug	and Abandon		Ter	mporarily	Abandon		DOGM
Final Abandonment Notice	Convert to Injection	Plug	Back	L	Wa	ater Dispo	sal	_	<del> </del>
testing has been completed. Final Aldetermined that the site is ready for fin THE OPERATOR REQUES LOCATION SO THAT THE BY THE DIVISION OF OIL,	al inspection TS AUTHORIZATION DRILLING OPERATIO	FOR A	ONE YEA Y BE COM	AR E	EXTE	ENSIO ED. TH	N FOR THI E ORIGINA Approved Utah Div	E SI AL A d by	JBJECT WELL PD WAS APPROVED If the In of
						C	il, Gas ar	nd M	/lining
•						Date	· 0>	_1	Z 1
						Ву: _	Boo	a	
14. I hereby certify that the foregoing i	is true and correct							1	
Name (Printed/Typed)		Title					`	1	1
RAMEY	HOOPES					LAND	SPECIALIS	ST I	
Signature AMUS	Morpet	Date	·			Ju	ıly 5, 2007		
	THIS SPACE	FOR FE	DERAL OR	STA	TE U	SE			
Approved by			Title				Date		
Conditions of approval, if any, are attached certify that the applicant holds legal or equivalent would entitle the applicant to conduct	itable title to those rights in the sub t operations thereon.	ject lease	Office		<b>,,,,,,</b>				
Title 19 HCC Continu 1001 make	it a crime for any nercon kno	wingly ar	d willfully to	n ma	ke to	any den	ertment or soer	nev of	the United States anv

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

JUL 17 2007

# Application for Permit to Drill Request for Permit Extension

Validation
(this form should accompany the Sundry Notice requesting permit extension)

API:

4304738522

Well Name: NBU 1022-5C-4				
Location: NENW, SEC 5-T10S-R22E, LOT 3  Company Permit Issued to: KERR-MCGEE OIL AND GAS ONSHORE LP				
Date Original Permit Issued: 8/29/2006				
The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.				
Following is a checklist of some items related to the application, which should be verified.				
If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes □ No ☑				
Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes□No☑				
Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes□No☑				
Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes□No ☑				
Has the approved source of water for drilling changed? Yes□No☑				
Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes□No☑				
Is bonding still in place, which covers this proposed well? Yes ☑ No ☐				
Signature 7/3/2007 Date				
Title: LAND SPECIALIST I				
Representing: Kerr McGee Oil and Gas Onshore LP				

#### STATE OF UTAH

DEDARTMENT OF NA			1 Ortin 5
DEPARTMENT OF NAT DIVISION OF OIL, (	S. LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195		
SUNDRY NOTICES AND	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A		
Do not use this form for proposals to drill new wells, significantly deepen ex drill horizontal laterals. Use APPLICATION FOR	isting wells below current botto PERMIT TO DRILL form for s	om-hole depth, reenter plugged wells, or to such proposals.	7. UNIT OF CA AGREEMENT NAME: 891008900A
1. TYPE OF WELL OIL WELL GAS WELL	OTHER		8. WELL NAME and NUMBER: NBU 1022-5C-4
2. NAME OF OPERATOR: Kerr-McGee Oil & Gas Onshore, LP			9. API NUMBER: 4304738522
3. ADDRESS OF OPERATOR: P.O. Box 173779 CITY Denver	STATE CO ZIP 8021		10. FIELD AND POOL, OR WILDCAT: Natural Buttes Field
4. LOCATION OF WELL			
FOOTAGES AT SURFACE: 1269' FNL & 2606' FWL			соинту: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW	5 10S 22E		STATE: UTAH
11. CHECK APPROPRIATE BOXES	TO INDICATE NA	ATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
NOTICE OF INTENT		DEEPEN	REPERFORATE CURRENT FORMATION
(Submit in Duplicate) ALTER CASING		FRACTURE TREAT	SIDETRACK TO REPAIR WELL
Approximate date work will start: CASING REPAIR		NEW CONSTRUCTION	TEMPORARILY ABANDON
CHANGE TO PREVIOU	IS PLANS	OPERATOR CHANGE	TUBING REPAIR
CHANGE TUBING		PLUG AND ABANDON	VENT OR FLARE
SUBSEQUENT REPORT CHANGE WELL NAME	ī	PLUG BACK	WATER DISPOSAL
(Submit Original Form Only)		PRODUCTION (START/RESUME)	WATER SHUT-OFF
Date of work completion:		RECLAMATION OF WELL SITE	✓ OTHER: APD Extension
CONVERT WELL TYPE	=	RECOMPLETE - DIFFERENT FORMATION	V OTHER: AT D EXTENSION
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS.			
Kerr-McGee Oil & Gas Onshore, LP, respectfor operations may be completed. The original A	ully requests an Af	PD Extension for one year for by the Utah Division of Oil, G	this location, so that drilling
Date:			COPY SENT TO OPERATOR  Date: 7.16.2008  Initials: 45
NAME (PLEASE PRINT) KEVIN MCZn+	yre_	тпье Regulatory Analys	t I
SIGNATURE King	-	DATE 7/9/2008	

(This space for State use only)

RECEIVED
JUL 1 1 2008



#### Application for Permit to Drill Request for Permit Extension Validation

(this form should accompany the Sundry Notice requesting permit extension)

API: 4304738522 Well Name: NBU 1022-5C-4 Location: SWNW Sec. 5, T10S R22E Company Permit Issued to: Kerr-McGee Oil & Gas On Date Original Permit Issued: 8/29/2006	nshore, LP
The undersigned as owner with legal rights to drill on above, hereby verifies that the information as submitted approved application to drill, remains valid and does re	ed in the previously
Following is a checklist of some items related to the a verified.	pplication, which should be
If located on private land, has the ownership changed agreement been updated? Yes □ No ☑	, if so, has the surface
Have any wells been drilled in the vicinity of the proporthe spacing or siting requirements for this location? Ye	
Has there been any unit or other agreements put in pl permitting or operation of this proposed well? Yes□N	
Have there been any changes to the access route inc of-way, which could affect the proposed location? Yes	, ,
Has the approved source of water for drilling changed	? Yes□No☑
Have there been any physical changes to the surface which will require a change in plans from what was dis evaluation? Yes□No☑	
Is bonding still in place, which covers this proposed we	ell? Yes⊠No□
Li ne	7/9/2008
Signature	Date
Title: Regulatory Analyst I	
Representing: Kerr-McGee Oil & Gas Onshore, LP	RECEIVED JUL 1 1 2008
	JUL 1 1 ZUU0

Form 3160-3 (August 1999)

## RECEIVED

FORM APPROVED OMB No. 1004-0136

AUG 2 4 2006

Expires November 30, 2000

5. Lease Serial No.

BUREAU OF LAND	MANAĢEMENT			UTU-01195		
APPLICATION FOR PERMIT	TO DRILL O	R REENTER		6. If Indian, Allotte	e or Tribe Name	
1a. Type of Work: X DRILL	UNIT #8910089	7. If Unit or CA Agreement, Name and No. UNIT #891008900A				
b. Type of Well: Oil Well Gas Well Oth	- <b></b>	Single Zone	Multiple Zone	8. Lease Name and		
2. Name of Operator	- <b>-</b>	Strigte Zotie	Manaple Zone	NBU 1022-50	<u></u>	
KERR McGEE OIL & GAS ONSHORE LP				43-047-	-38522	
3A. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	(435) 781		code)	10. Field and Pool, NATURAL BUT	TES	
4. Location of Well (Report location clearly and in accordance At surface SENENW LOT 3, 1269'FNL, 26 At proposed prod. Zone		quirements.*)		11. Sec., T., R., M., SEC. 5, T10S, F		or Area
14. Distance in miles and direction from nearest town or post of	ffice*			12. County or Paris	<del></del>	te
24.1 MILE SOUTHEAST OF OURAY, UTAH				UINTAH	UTAH	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of 2	Acres in lease	17. Spacing U	nit dedicated to this well		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.  REFER TOPO	19. Proposed Depth 20. BLM/BIA Bo		Bond No. on file WY-2357 WY BC	XXX		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5188'UNGRADED GL</b>	22. Approx	imate date work	vill start*	23. Estimated durat	ion	
	24. /	Attachments				
The following, completed in accordance with the requirements of	of Onshore Oil and	Gas Order No. 1	, shall be attached	to this form:		
1. Well plat certified by a registered surveyor.		4. Bond to	cover the operation	ons unless covered by an exi	sting bond on file (s	see
2. A Drilling Plan.		Item 20 a	bove).			
<ol> <li>A Surface Use Plan (if the location is on National Forest Sys SUPO shall be filed with the appropriate Forest Service Office</li> </ol>		-	-	rmation and/or plans as may	be required by the	
25. Signature		me (Printed/Type IEILA UPCH	•		Date 8/23/200	)6
REGULATORY ANALYST						
Approved by (Signature)	Na	me (Printed/Type			PAUG 25	200
Title Assistant field Manager	Off		AL FIELD (	OFFICE		
Application approval does not warrant or certify that the applica operations thereon.  Conditions of approval, if any, are attached.	ont holds legal or e	quitable title to the NS OF	ose rights in the s	ROVAL A	title the applicant to	Eb
Title 18 U.S.C. Section 1001and Title 43 U.S.C. Section 1212, 1	make it a crime for	any person knov	vingly and willfull	y to make to any department	or agency of the U	nited

**UNITED STATES** 

DEPARTMENT OF THE INTERIOR

\*(Instructions on reverse)

06BM 1703A Entered in AFMSS Date 11-20-06

States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED

SEP 0 2 2008

**NOTICE OF APPROVAL** 

DIV. OF OIL, GAS & MINING

NOS 05/09/06



#### UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT VERNAL FIELD OFFICE**

**VERNAL. UT 84078** 

(435) 781-4400



#### CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:

Kerr McGee Oil & Gas Onshore LP

Location: Lease No: Lot 3, Sec. 5, T10S, R22E UTU-01195

Well No: API No:

NBU 1022-5C-4 43-047-38522

Agreement:

Natural Buttes Unit

Title	Name	Office Phone Number	Cell Phone Number
Petroleum Engineer:	Matt Baker	(435) 781-4490	(435) 828-4470
Petroleum Engineer:	Michael Lee	(435) 781-4432	(435) 828-7875
Petroleum Engineer:	James Ashley	(435) 781-4470	(435) 828-7874
Petroleum Engineer:	Ryan Angus	(435) 781-4430	(435) 828-7368
Supervisory Petroleum Technician:	Jamie Sparger	(435) 781-4502	(435) 828-3913
Supervisory NRS:	Karl Wright	(435) 781-4484	(435) 828-7381
NRS/Enviro Scientist:	Holly Villa	(435) 781-4404	(435) 828-3544
NRS/Enviro Scientist:	James Hereford	(435) 781-3412	
NRS/Enviro Scientist:	Chuck Macdonald	(435) 781-4441	(435) 828-7481
NRS/Enviro Scientist:	Dan Emmett	(435) 781-3414	
NRS/Enviro Scientist:	Paul Percival	(435) 781-4493	
NRS/Enviro Scientist:	Michael Cutler	(435) 781-3401	(435) 828-3546
NRS/Enviro Scientist:	Anna Figueroa	(435) 781-3407	(435) 828-3548
NRS/Enviro Scientist:	Verlyn Pindell	(435) 781-3402	(435) 828-3547
NRS/Enviro Scientist:	Darren Williams	(435) 781-4447	(435) 828-4029
NRS/Enviro Scientist:	Nathan Packer	(435) 781-3405	(435) 828-3545
		Fax: (435) 781-3420	

Fax: (435) 781-3420

#### A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.

#### **NOTIFICATION REQUIREMENTS**

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings.
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

Page 2 of 6 Well: NBU 1022-5C-4 8/21/2008

#### SURFACE USE PROGRAM CONDITIONS OF APPROVAL (COAs)

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.
- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.
- During operations, if any vertebrate paleontological resources are discovered, all operations
  affecting such sites shall be immediately suspended, and all discoveries shall be left intact until
  authorized to proceed by the Authorized Officer. The appropriate Authorized Officer of the
  Vernal BLM office shall be notified within 48 hrs of the discovery, and a decision as to the
  preferred alternative/course of action will be rendered.
- The topsoil from the reserve pit shall be stripped and piled separately near the reserve pit. When the reserve pit is closed, it shall be recontoured and the topsoil respread, and the area shall be seeded in the same manner as the location topsoil.
- Once the location is plugged and abandoned, it shall be recontoured to natural contours, topsoil
  respread where appropriate, and the entire location seeded with the recommended seed mix.
  Seeding shall take place by broadcasting the seed and walking it into the soil with a dozer
  immediately after the dirt work is completed.
- Seeding shall occur in the fall (August 1<sup>st</sup> until snow or ground is frozen).

Page 3 of 6 Well: NBU 1022-5C-4

8/21/2008

## DOWNHOLE PROGRAM CONDITIONS OF APPROVAL (COAs)

#### SITE SPECIFIC DOWNHOLE COAs:

- Production casing cement shall be brought up and into the surface casing. The minimum cement top is 200 ft above the surface casing shoe.
- A cement Bond Log (CBL) shall be run from the production casing shoe to the surface casing shoe. A field copy of the CBL shall be submitted to the BLM Vernal Field Office.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

#### DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the
  daily drilling report. Components shall be operated and tested as required by Onshore Oil &
  Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be
  performed by a test pump with a chart recorder and <u>NOT</u> by the rig pumps. Test shall be
  reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- Cement baskets shall not be run on surface casing.
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water
  is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM
  Vernal Field Office.

Page 4 of 6 Well: NBU 1022-5C-4 8/21/2008

• The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.
- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.
- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

Page 5 of 6 Well: NBU 1022-5C-4

8/21/2008

#### OPERATING REQUIREMENT REMINDERS:

• All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Should the well be successfully completed for production, the BLM Vernal Field office must be
  notified when it is placed in a producing status. Such notification will be by written
  communication and must be received in this office by not later than the fifth business day
  following the date on which the well is placed on production. The notification shall provide, as a
  minimum, the following informational items:
  - o Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - o The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - o Unit agreement and/or participating area name and number, if applicable.
  - o Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

Page 6 of 6 Well: NBU 1022-5C-4 8/21/2008

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the

 All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

BLM, Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field
  Office Petroleum Engineers will be provided with a date and time for the initial meter calibration
  and all future meter proving schedules. A copy of the meter calibration reports shall be
  submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API
  standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All
  measurement points shall be identified as the point of sale or allocation for royalty purposes.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted
  to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs
  first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be
  adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively
  sealed in accordance with Onshore Oil & Gas Order No. 3.
- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering
  lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of
  a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval
  may be obtained orally, but such approval does not waive the written report requirement.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover
  equipment shall be removed from a well to be placed in a suspended status without prior
  approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30
  days, prior approval of the BLM Vernal Field Office shall be obtained and notification given
  before resumption of operations.
- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office
  Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in
  order that a representative may witness plugging operations. If a well is suspended or
  abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent
  Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual
  plugging of the well bore, showing location of plugs, amount of cement in each, and amount of
  casing left in hole, and the current status of the surface restoration.

# DIVISION OF OIL, GAS AND MINING

### **SPUDDING INFORMATION**

Name of Cor	mpany:	KERR-McGE	E OIL	& GAS C	<u> NSHORI</u>	E, L.P.	
Well Name	•	NBU 10	<u> 22-5C-</u>	-4			
Api No:	43-047-3	8522		_Lease T	ype: <u>FED</u>	ERAL	··
Section 05	_Township_	10S Range	22E	Cou	nty <u>UIN</u>	ТАН	
Drilling Cor	ntractor	PETE MA	RTIN	DRLG	RIG #_	RATHOLE	
SPUDDE	D:						
	Date	01/06/2009	9				
	Time	8:00 AM					٠
	How	DRY					
Drilling wi	ill Comme	nce:		<u> </u>		<u> </u>	
Reported by		LEW	<u>WELI</u>	OON			
Telephone#		(435)	<u>828-70</u>	35			
Date	01/06/2009	Signed	(	CHD			

### STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING

#### **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

1368 SOUTH 1200 EAST

city VERNAL

state UT

zip 84078

Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304738522	NBU 1022-5C-4		NENW	5	108	22E	UINTAH
Action Code	Current Entity Number	New Entity Number	s	pud Dat	e	1	ity Assignment Effective Date
В	99999	2900		1/6/2009	)	1	115/09

Comments: MIRU PETE MARTIN BUCKET RIG. MIRU PETE MARTIN BUCKET RIG. WS 7M V D SPUD WELL LOCATION ON 01/06/2009 AT 0800 HRS

Wall 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		y Assignment fective Date
omments:							

Wall 3

API Number	Well Name		ber Well Name QQ Sec Twp		Twp	Rng County		
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		y Assignment fective Date	
Comments:								

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- B Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity
- E Other (Explain in 'comments' section RECEIVED

JAN 0 6 2009

SHEILA UPCHEGO

**REGULATORY ANALYST** Title

1/6/2009

Date

(5/2000)

Form 3160-5 (August 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVE	I
OMB NO. 1004-013	3
Expires: July 31, 20	J

5. Lease Serial No.

SUNDRY N	OTICES AND REPORTS ON WELLS	
Do not use this	form for proposals to drill or to re-enter a	n
abandanad wall	Has form 2160 2 (ADD) for such propose	10

SUNDRY NOTICES AND REPORTS ON WELLS					UTU01195		
Do not use thi abandoned we	Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.				6. If Indian, Allottee of	Tribe Nam	ie
SUBMIT IN TRI	PLICATE - Other instructi	ons on reve	erse side.		7. If Unit or CA/Agree UNIT #8910089	ment, Name	e and/or No.
1. Type of Well	-		8. Well Name and No. NBU 1022-5C-4				
Oil Well Gas Well Oth  Name of Operator		HEILA UPCI	HEGO		9. API Well No.		<del></del>
KERR-MCGEE OIL & GAS OI			· · · · · · · · · · · · · · · · · · ·	43-047-38522			
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No. Ph: 435-781	(include area cod  -7024	e)	10. Field and Pool, or NATURAL BUT			
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description)				11. County or Parish, a	nd State	
Sec 5 T10S R22E NENW 126	9FNL 2606FWL				UINTAH COUN	íΥ, UT	
12. СНЕСК АРРІ	ROPRIATE BOX(ES) TO I	NDICATE	NATURE OF	NOTICE, R	EPORT, OR OTHER	R DATA	
TYPE OF SUBMISSION			ТҮРЕ (	OF ACTION			
Notice of Intent	☐ Acidize	☐ Deep	en	☐ Product	tion (Start/Resume)	☐ Wate	r Shut-Off
☐ Notice of Intent	☐ Alter Casing	☐ Fract	ure Treat	□ Reclam	ation	■ Well Integrity	
☐ Subsequent Report	□ Casing Repair	□ New	Construction	□ Recomp	olete	Other	
☐ Final Abandonment Notice	Change Plans	Plug	g and Abandon 🔲 Tempora		orarily Abandon Drilling O		Operations
	☐ Convert to Injection	Plug	Back	■ Water I	Disposal		
following completion of the involved testing has been completed. Final Abdetermined that the site is ready for final PROPETRO AIR RIG COURFACE CSG. CMT W/300 PLUG FLOATS HELD. TOP COUT W/100 SX PREM CLASS @15.8 PPG 1.15 YIELD DOW BACKSIDE CMT TO SURFACE WORT.	nandonment Notices shall be filed inal inspection.)  ON 01/07/2009. DRILLED of 0 SX PREM CLASS G @15 DUT W/150 SX PREM CLA B G @15.8 PPG 1.15 YIELI IN BACKSIDE WOC. 4TH 1	only after all re 12 1/4" SUR 5.8 PPG 1.15 SS G @15.8 D DOWN BA	equirements, inclusions FACE HOLE 5 YIELD. NO F B PPG 1.15 YI CKSIDE WOO	iding reclamation TO 2430'. RA RETURNS TO ELD DOWN I C. 3RD TOP I	n, have been completed, a AN 9 5/8" 36# J-55 D PIT 210 PSI LIFT L BACKSIDE WOC. 21 OUT W/125 SX PRE	AND ND TOP M CLASS	ator has
14. I hereby certify that the foregoing is	Electronic Submission #66	277 verified	by the BLM We	ell Information	System		
	For KERR-MCGEE	DIL & GAS ΦI	NŠHORE L, se	nt to the Vern	al		
Name (Printed/Typed) SHEILA U	PCHEGO		Title OPERATIONS				
Signature	Submission Mills	10	Date 01/14/	2009	·		
	THIS SPACE FOR	FEDERA	L OR STATE	OFFICE U	SE		
			m'd			Dod	
Approved By		{	Title	<u> </u>		Dat	
Conditions of approval, if any, are attache certify that the applicant holds legal or equivalent would entitle the applicant to conditions.	uitable title to those rights in the suct operations thereon.	ubject lease	Office				
Title 18 U.S.C. Section 1001 and Title 43	U.S.C. Section 1212, make it a cr	ime for any per	son knowingly ar	nd willfully to m	ake to any department or	agency of th	ne United

Form 3160-5 (August 2007)

### UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2016

SUNDRY NOTICES AND REPORTS ON WELLS	
Do not use this form for proposals to drill or to re-enter an	
abandoned well. Use form 3160-3 (APD) for such proposals	٠.

5. Lease Serial No. UTU01195

Do not use th abandoned we	6. If Indian, Allottee	6. If Indian, Allottee or Tribe Name		
SUBMIT IN TRI	PLICATE - Other instruction	s on reverse side.	7. If Unit or CA/Agr UNIT	eement, Name and/or No.
Type of Well     Oil Well			8. Well Name and No NBU 1022-5C-4	)
Name of Operator     KERR-MCGEE OIL & GAS O	Contact: SHE	EILA UPCHEGO @anadarko.com	9. API Well No. 43-047-38522	
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078		Phone No. (include area code): 435-781-7024	10. Field and Pool, o NATURAL BU	r Exploratory TTES
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description)		11. County or Parish	, and State
Sec 5 T10S R22E NENW 126	9FNL 2606FWL		UINTAH COUI	NTY, UT
12. CHECK APPI	ROPRIATE BOX(ES) TO IN	DICATE NATURE OF 1	NOTICE, REPORT, OR OTHE	ER DATA
TYPE OF SUBMISSION		TYPE OI	FACTION	
☐ Notice of Intent	☐ Acidize	□ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
_	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	□ Casing Repair	■ New Construction	☐ Recomplete	Other
☐ Final Abandonment Notice	☐ Change Plans	Plug and Abandon	☐ Temporarily Abandon	Well Spud
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	
determined that the site is ready for finding PETE MARTIN BUCKE CMT W/28 SX READY MIX.  SPUD WELL LOCATION ON	T RIG. DRILLED 20" CONDU	JCTOR HOLE TO 40'. R	AN 14" 36.7# SCHEDULE 10 F	PIPE.
14. I hereby certify that the foregoing is	Electronic Submission #6606	8 verified by the BLM Well & GAS ONSHORE L, sen	Information System t to the Vernal	
Name (Printed/Typed) SHEILA U	PCHEGO	Title OPERA	TIONS	
Signature	Jubpission Mille	Date 01/06/2	009	
	THIS SPACE FOR	EDERAL OR STATE	OFFICE USE	
Approved By	. <b></b>	Title		Date
Conditions of approval, if any, are attache certify that the applicant holds legal or equal which would entitle the applicant to condu	iitable title to those rights in the subje			
Title 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulent s	U.S.C. Section 1212, make it a crime statements or representations as to an	for any person knowingly and y matter within its jurisdiction.	willfully to make to any department o	r agency of the United



# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB NO. 1004-0135 Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an
abandoned well. Use form 3160-3 (APD) for such proposals.

UTU01195

5. Lease Serial No.

abandoned we	II. Use form 3160-3 (AP	D) for such p	proposals.		6. If Indian, Afforce or	Thoe Name
SUBMIT IN TRIPLICATE - Other instructions on reverse side.				7. If Unit or CA/Agreement, Name and/or No. UNIT #891008900A		
1. Type of Well ☐ Oil Well ☐ Gas Well ☐ Other					8. Well Name and No. NBU 1022-5C-4	
2. Name of Operator					9. API Well No. 43-047-38522	
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	3b. Phone No Ph: 435-78	. (include area code) 31-7024	H	10. Field and Pool, or Exploratory NATURAL BUTTES		
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description	1)		-	11. County or Parish, a	nd State
Sec 5 T10S R22E NENW 126			UINTAH COUNT	Y, UT		
12. CHECK APPI	ROPRIATE BOX(ES) TO	O INDICATE	NATURE OF 1	NOTICE, R	EPORT, OR OTHER	DATA
TYPE OF SUBMISSION			TYPE OF	FACTION		
☐ Notice of Intent	☐ Acidize	☐ Dee	pen	☐ Produc	tion (Start/Resume)	☐ Water Shut-Off
<del></del>	☐ Alter Casing	☐ Frac	cture Treat	Reclam	ation	■ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ Nev	/ Construction	□ Recom	olete	☑ Other
☐ Final Abandonment Notice	☐ Change Plans ☐ Plu		ig and Abandon 🔲 Ter		rarily Abandon	Drilling Operations
	☐ Convert to Injection	🗖 Plug	g Back	■ Water I	Disposal	
If the proposal is to deepen directions Attach the Bond under which the wor following completion of the involved testing has been completed. Final Ab- determined that the site is ready for fi  FINISHED DRILLING FROM 2 CMT W/440 SX PREM LITE II YIELD. WASH LINES DROP I LOST RETURNS 70 BBLS IN BUMPED PLUG W/3100 PSI LAYDOWN LANDING JT SET CHLORINE TABS DOWN CS RELEASED PIONEER RIG 68	k will be performed or provide operations. If the operation re anadomment Notices shall be fil inal inspection.)  2430' TO 9125' ON 02/02  @11.6 PPG 2.73 YIELD PLUG & DISPLACE W/1. DISPLACEMENT SLOW & PLUG HELD 500 OVE MANDREL PACKING A GINSTALL NIGHT CAP BON 02/03/2009 AT 213	e the Bond No. or sults in a multipled only after all 2/2009. RAN 5. TAILED CM 41 BBLS WAVED PUMP R R PSI 1.5 BB SSEMBLY & CLEAN MUD 0 HRS.	a file with BLM/BIA e completion or recordequirements, included 4 1/2" 11.6# I-80 T W/1200 SX 50 TER CLAYTREA ATE DOWN TO LS BLEED OFF TEST TO 5000 PITS.	Required submpletion in a ing reclamation PRODUCT 0/50 POZ @ T WATER 42.6 BPM GFLUSH ST/PSI. NIPPLI	bsequent reports shall be f new interval, a Form 3160 n, have been completed, and 14.3 PPG 1.31 + 1 GAL MAGNACIDE DOF LIFT W/2601 PS ACK & EMPTY UPRIG E DOWN BOP DROP	iled within 30 days -4 shall be filed once and the operator has  E @8.3 PPG BI PUMPING GHT.
	For KERR-MCGE	E OIL & GAS	NŠHORE L, sen	t to the Vern	al	
Name (Printed/Typed) SHEILA U	PUREGO		Title OPERA	TIONS		
Signature Signature	amidsign MU	410	Date 02/04/2	009		
	THIS SPACE FO	OR FEDERA	L OR STATE	OFFICE U	SE	
Approved By	<b></b> _		Title			Date
Conditions of approval, if any, are attached certify that the applicant holds legal or equivalent would entitle the applicant to conductive th	nitable title to those rights in the	e subject lease	Office			
Fitle 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulents	U.S.C. Section 1212, make it a statements or representations as	crime for any post to any matter w	erson knowingly and ithin its jurisdiction.	willfully to m	ake to any department or a	gency of the United
,,	- I				<del>- HE</del> C	<del>ILIVLU</del>

Fo	rm §160-5
(A	ugust 2007)

# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB NO. 1004-0135 Expires: July 31, 2010

5. Lease Serial No.

	NOTICES AND REPOR				01001195				
Do not use thi abandoned wel	is form for proposals to d II. Use form 3160-3 (APD	irill or to re- ) for such p	enter an roposals. 		6. If Indian, Allottee or	Tribe Name			
SUBMIT IN TRI	7. If Unit or CA/Agree UNIT #89100890								
1. Type of Well ☐ Oil Well ☑ Gas Well ☐ Oth	ner				8. Well Name and No. NBU 1022-5C-4				
Name of Operator     KERR-MCGEE OIL & GAS OI	Contact: S NSHORELMail: sheila.upche	SHEILA UPC ego@anadarko	HEGO .com		9. API Well No. 43-047-38522				
3a. Address 1368 SOUTH 1200 EAST VERNAL, UT 84078	)	10. Field and Pool, or Exploratory NATURAL BUTTES							
4. Location of Well (Footage, Sec., T.		11. County or Parish, a	nd State						
Sec 5 T10S R22E NENW 126		UINTAH COUNT	Y, UT						
12. CHECK APPF	ROPRIATE BOX(ES) TO	INDICATE	NATURE OF	NOTICE, RI	EPORT, OR OTHER	DATA			
TYPE OF SUBMISSION			ТҮРЕ О	F ACTION					
☐ Notice of Intent	☐ Acidize	Deep	en	□ Product	ion (Start/Resume)	■ Water Shut-Off			
1 Notice of Intent	☐ Alter Casing	☐ Fract	ure Treat	□ Reclam	ation	■ Well Integrity			
☐ Subsequent Report	☐ Casing Repair	Construction	□ Recomp	olete	Other				
☐ Final Abandonment Notice	☐ Change Plans	and Abandon	□ Tempor	arily Abandon	Drilling Operations				
_	☐ Water I	Disposal							
testing has been completed. Final Abdetermined that the site is ready for final THE SUBJECT WELL WAS PPLEASE REFER TO THE AT	inal inspection.) LACED ON PROUDCTION	N ON 02/27/2	2009 AT 9:00 A						
14. I hereby certify that the foregoing is	true and correct. Electronic Submission #6 For KERR-MCGEE								
Name (Printed/Typed) SHEILA U	ATIONS								
Signature	Submission IIII	Date 03/02/2	2009						
	OFFICE U	SE							
Approved By			Title			Date			
Conditions of approval, if any, are attached certify that the applicant holds legal or equ	nitable title to those rights in the s		or						
Title 18 U.S.C. Section 1001 and Title 43	hich would entitle the applicant to conduct operations thereon.  Office  itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any reputies of layers pi he United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.								

### **Operation Summary Report**

				•			ary Keport					
Well NBU 102	2-5C-4				1/6/200	9	Spud Date 1/7					
Project UTAH			Site UIN	ITAH				Rig Name No PROPETRO/, PIONEER 68/68				
Event DRILLIN	· · · · · · · · · · · · · · · · · · ·		Start Da	te 1/7/2	009			End Date 2/3/2009				
Active Datum ( Level)	RKB @5,206 00ft (	above Mean	Sea	UWI 0	/10/S/22/ 	E/5/0/N	0/NENW/6/PM/N/1,269 00/W/0/2,606 00/0/0					
Date	Time Start-End	Duration (hr)	Phase	Code	Subco de2	P/U	MD From (ft)	Operation				
1/7/2009	16 00 - 0 00	8 00	DRLSUR	02		Ρ		MOVE IN AND RIG UP AIR RIG SPUD WELL @				
1/8/2009	0 00 - 12 00	12 00	DRLSUR	02		Р		1600 HR 1/7/08 DA AT REPORT TIME 540' RIG DRILLING AHEAD NO WATER 1110'				
	12 00 - 0 00	12 00	DRLSUR	02		P		RIG DRILLING AHEAD PICKED UP ALITTLE WATER @ 1270' DRILL TO 1410' @ REPORT TIME				
1/9/2009	0 00 - 12 00	12 00	DRLSUR	02		Р		RIG DRILLING AHEAD HIT TRONA WATER @ 1560' CIRCULATING WITH SKID PUMP 1680'				
	12 00 - 0 00	12 00	DRLSUR	02		Р		RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP NO RETURNS 1950'				
1/10/2009	0 00 - 6 00	6 00	DRLSUR	02		Р		RIG DRILLED TO 2040' STUCK PIPE				
	6 00 - 15 00	9 00	DRLSUR	16	В	Χ		WORK STUCK PIPE FREE CONDITION HOLE				
	15 00 - 0 00	9 00	DRLSUR	02		Р		RIG DRILLING AHEAD CIRCULATING WITH SKID PUMP 2280'				
1/11/2009	0 00 - 9 00	9 00	DRLSUR	02		Р		RIG T/D @ 2430' CONDITION HOLE 1 HR RUN SURVEY 1 75 DEG				
	9 00 - 12 00	3 00	DRLSUR	05		Р		TRIP DP OUT OF HOLE				
	12 00 - 15 00	3 00	DRLSUR	11		Ρ		RUN 2378' OF 9 5/8 CSG AND RIG DOWN AIR RIG				
	15 00 - 16 00	1 00	DRLSUR	15		Р		CEMENT 1ST STAGE WITH 300 SKS TAIL @ 15 8# 1 15 5 0 GAL/SK NO RETURNS TO PIT 210 PSI LIFT LAND PLUG FLOATS HELD				
	16 00 - 16 00	0 00	DRLSUR	15		Ρ		1ST TOP JOB 150 SKS DOWN BS WOC				
	16 00 - 19 30	3 50	DRLSUR	15		Р		2ND TOP JOB 100 SKS DOWN BS WOC				
	19 30 - 21 30	2 00	DRLSUR	15		Р		3RD TOP JOB 125 SKS DOWN BS WOC				
	21 30 - 23 30 23 30 - 23 30	2 00 0 00	DRLSUR DRLSUR	15		Р		4TH TOP JOB 75 SKS DOWN BS CEMENT TO SURFACE AND STAYED AT SURFACE NO VISIBLE LEAKS PIT 20% FULL WORT				
1/24/2009	0 00 - 7 00	7 00	RDMO	01	Е	Р		RDRT F/MOVE TO NBU 1022-5C-4				
1/24/2009	700 - 1800	11 00	MIRU	01	A	Р		TRUCK W/L&S TRUCKING 8				
	18 00 - 0 00	6 00	MIRU	12	D	Р		TRUCKS,2-FORKLIFT,1 J&C CRAIN SHUT DOWN F/ DAYLITE				
1/25/2009	000 - 700	7 00	MIRU	12	D	S		SDFN				
	700 - 000	17 00	MIRU	01	В	Р		SPOT RIG NOON,RURT				
1/26/2009	0 00 - 4 00	4 00	PRPSPD	13	A	Р		NUBOP, CHOKE , FLARE LINES & FUNCTION TEST				
W20/2000	400 - 900	5 00	PRPSPD	13	С	P		TEST BOP,CHOKE,KILL,RAMS-5K,ANN-2 5K,CSG-1 5K,2 50 LOWS				
	9 00 - 15 00	6 00	PRPSPD	05	Α	Р		INSTALLWEARRIN,P/U BHA & DP,TAG 2303'				
	15 00 - 16 00	1 00	PRPSPD	04	Α	Р		KELLY UP ,INSTALL ROTATING RUBBER,CIRC W/BOTH PUMPS				
	16 00 - 17 00	1 00	PRPSPD	02	F	Р		DRILL CEMENT & FE 2303-2448'				
	17 00 - 18 00	1 00	DRLPRO	02	В	Р		DRILL NEW 7 875,F/2448 TO 2529				
	18 00 - 18 30	0 50	DRLPRO	09	Α	Р		SURVEY@2459=1 6				
	18 30 - 0 00	5 50	DRLPRO	02	В	Р		DRILL F/2529 TO 3036,AVG 92 WT 8 9/34				
1/27/2009	0 00 - 0 30	0 50	DRLPRO	09	A	Р		SURVEY@2960=1 26				
	030 - 600	5 50	DRLPRO	02	В	Р		DRILL F/3036 TO 3573',AVG 97 WT 8 9/34				
	600 - 630	0 50	DRLPRO	09	A	P		SURVEY@3503=1 22				
	630 - 730	1 00	DRLPRO	02	В	P		DRILL F/3573 TO 3637,AVG 65 WT 9 0/36				
	7 30 - 8 00	0 50	DRLPRO	06	A	Р		RIG SERVICE				
	8 00 - 16 30	8 50	DRLPRO	02	В	Р		DRILL F/3637 TO 4554,AVG 108 WT 9 5/37				
	16 30 - 17 00	0 50	DRLPRO	09	A	P		SURVEY@4484=1 66				

### **Operation Summary Report**

Spud Date: 1/7/2009 Spud Conductor: 1/6/2009 Well: NBU 1022-5C-4 Rig Name No: PROPETRO/, PIONEER 68/68 Project: UTAH Site: UINTAH Start Date: 1/7/2009 End Date: 2/3/2009 Event: DRILLING

Active Datum: .evel)	RKB @5,206.00ft (a	above Mear	n Sea	OVVI: 0	10/8/22	/E/5/U/NI	ENW/6/PM/N/1,269.00/W/0/2,606.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Subco de2	P/U	MD From Operation (ft)
	17:00 - 0:00	7.00	DRLPRO	02	В	Р	DRILL F/4554 TO 5125,AVG 82 WT 9.8/38
1/28/2009	0:00 - 6:00	6.00	DRLPRO	02	В	Р	DRILL F/5125 TO 5560,AVG 72 WT 9.9/38
	6:00 - 6:30	0.50	DRLPRO	09	Α	Р	SURVEY@5490=.93
	6:30 - 14:30	8.00	DRLPRO	02	В	P	DRILL F/5560 TO 5971,AVG 52 WT 10.1/38
	14:30 - 15:00	0.50	DRLPRO	06	Α	Р	RIG SERVICE
	15:00 - 0:00	9.00	DRLPRO	02	В	Р	DRILL F/5971 TO 6368,AVG 44 WT 10.2/40
1/29/2009	0:00 - 11:00	11.00	DRLPRO	02	В	Р	DRILL F/6368 TO 6635,AVG 24 WT 10.4/36
	11:00 - 16:30	5.50	DRLPRO	05	Α	P	DROP SURVEY PUMPPILL, POOH, TIGHT 4511
	16:30 - 22:30	6.00	DRLPRO	05	Α	S	CHANGE BIT, TIH W/#2, CIRC @SHOE, L/D 2DC&IBS, RERUN MUD MTR, wash 60' TO BTM
	22:30 - 0:00	1.50	DRLPRO	02	В	Р	DRILL F/6635 TO 6680,AVG 30 WT 10.4/38
1/30/2009	0:00 - 14:00	14.00	DRLPRO	02	В	Р	DRILL F/6680 TO 7296,616AVG 44WT10.4/38
	14:00 - 14:30	0.50	DRLPRO	06	Α	Р	RIG SERVICE
	14:30 - 0:00	9.50	DRLPRO	02	В	Р	DRILL F/7296 TO 7660,364'AVG 40 WT10.7/38
1/31/2009	0:00 - 14:00	14.00	DRLPRO	02	В	Р	DRILL F/7660 TO 8215,555'=AVG 40,WT 11.2/40SPM120,SPP1900-2100STWT 176-166-160,WOB 18-22,DIFF200,GPM-422
	14:00 - 14:30	0.50	DRLPRO	06	Α	Р	CROWN BLOCKS SWIVAL, RIG
	14:30 - 0:00	9.50	DRLPRO	02	В	Р	DRILL F/8215 TO 8548,333'AVG 35,WT11.6/38,SPM120,SPP2000-2300,STWT-180- 70-160WOB18-22DIFF250,GPM-422
2/1/2009	0:00 - 7:00	7.00	DRLPRO	02	В	Р	DRILL F/8548 TO 8682,134'AVG 17,WT11.7/40 SPM120,SPP2000-2300,STWT180-170- 162WOB20-25,DIFF250,GPM422
	7:00 - 13:30	6.50	DRLPRO	05	Α	S	PUMPPILL,DROP,SURVEY,POOH, W/BIT #2
	13:30 - 16:00	2.50	DRLPRO	05	Α	Р	CHANGE BIT, TIH TO SHOE, CIRC BHA
	16:00 - 18:00	2.00	DRLPRO	06	D	Р	CUT & SLIP 130' DRLG LINE
	18:00 - 22:00	4.00	DRLPRO	05	Α	Р	TIH W/BIT #3
	22:00 - 22:30	0.50	DRLPRO	03	D	Р	REAM 60' TO BTM,10' FLARE ,3' FILL
	22:30 - 0:00	1.50	DRLPRO	02	В	Р	DRILL F/8682' TO 8756,74'AVG49 WT11.9/42SPM110SPP2000-2200,STWT 180-170-164,WOB18,DIFF200,GPM 400
2/2/2009	0:00 - 8:00	8.00	DRLPRO	02	В	P	DRILL F/8756 TO 9125,369' AVG 46,WT 12.0/42,SPM110SPP2000,STWT 180-170-165,WOB20,DIFF 200,GPM400
	8:00 - 9:00	1.00	DRLPRO	04	С	Р	CIRCULATE F/SHORTTRIP
	9:00 - 10:00	1.00	EVALPR	05	E	P	SHORTTRIP BACK TO 8100', NO PROBLEMS
	10:00 - 12:00	2.00	<b>EVALPR</b>	04	Α	Р	CIRC & COND TO LDDP, AND LOG
	12:00 - 21:00	9.00	EVALPR	05	В	Р	SAFETY MEET W/TESCO,,R/U-LDDP & BHA,BREAKKELLY ,PULL WEARRING
01010000	21:00 - 0:00	3.00	EVALPR	80	A	Р	SAFETY MEET W/HALLIBURTON ,RUN TRIPLE COMBO , LOGGERS DEPTH 9124
2/3/2009	0:00 - 2:30	2.50	EVALPR	08	F	Р	RUN TRIPLE COMBO ,LOGGERS DEPTH 9124'
	2:30 - 3:30	1.00	CSG	11	A	Р	SAFETY MEET W/TESCO, RIG UP
	3:30 - 10:30	7.00	CSG	11	В	P	RUN 215 JTS & MARKER,9114' 4.5 CSG
	10:30 - 12:00	1.50	CSG	04	E	Р	CIRC F/CEMENT ,W/10' FLARE 10MIN

			perat		OCKIES umm	ary Report				
Well: NBU 1022-5C-4	<u> </u>	Spud C	onductor	: 1/6/200	)9	Spud Date: 1/	7/2009			
Project: UTAH		Site: Uli	HATV				Rig Name No: PROPETRO/, PIONEER 68/68			
Event: DRILLING		Start Da	ite: 1/7/2	009	Τ		End Date: 2/3/2009			
Active Datum: RKB @5,206.00ft (a Level)	above Mean	Sea	UWI: 0	/10/S/22	22/E/5/0/NENW/6/PM/N/1,269.00/W/0/2,606.00/0/0					
Date Time Start-End	Duration (hr)	Phase	Code	Subco de2	-P/U	MD From (ft)	Operation			
12:00 - 16:30	4.50	CSG	15	A	P		(HELD SAFETY MEETING W/ BJ SERVICES) ( SWITCH LINES & TEST TO 4500 PSI) (PUMP 20 BBLS MUD CLEAN) (PUMP 214 BBLS LEAD,440 SCKS PREMIUM LITE @ 11.6 PPG,2.73 cF SACK YIELD) (PUMP 280 BBLS,1200 SCKS 50:50 POZ MIX @ 14.3 PPG,1.31cF SACK YIELD) (WASH LINES DROP PLUG & DISPLACE W/ 141 BBLS WATER CLAYTREATED + 1 GL MAGNACIDE @ 8.3 PPG) (LOST RETURNS 70 BBLS IN DISPLACEMENT SLOWED PUMP RATE DOWN TO 2.6 BPM) (GOOD LIFT W/ 2601 PSI PUMPING PSI) (BUMPED PLUG W/ 3100 PSI & PLUG HELD ) (500 OVER PSI) (1.5 BBLS BLEED OFF) ( FLUSH STACK & EMPTY UPRIGHTS W/ BJ) ( RIG DOWN BJ & LAYDOWN LANDING JOINT) ( SET MANDREL PACKING ASSEMBLY & TEST TO 5000 PSI)			
16:30 - 21:30	5.00	CSG	13	Α	Р		NIPPLE DOWN BOP, DROP 20 CHLORINE TABS DOWN CSG, INSTALL NIGHT CAP. CLEAN MUD PITS, EXCESSIVE SOLIDS IN SHALE PIT. ( RELEASE RIG @ 21:30 2/3/2009			

3/2/2009 3:22:17PM

3

Well: NBU 102	22-5C-4	Well: NBU 1022-5C-4				09	Spud Date: 1/7/2009
Project: UTAH	roject: UTAH Site:						Rig Name No: KEY 243/243
Event: COMPI	LETION		Start Date: 2/19/2009 End Date: 2/25/2009				
Active Datum: Level)	RKB @5,206.00ff	(above Mean	Sea	UWI: 0	/10/S/22	/E/5/0/NE	NW/6/PM/N/1,269.00/W/0/2,606.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Subco de2	P/U	MD From Operation (ft)
2/19/2009	7:00 - 7:15	0.25	COMP	48		Р	HSM, REVIEW ROADING RIG
	7:15 - 17:00	9.75	COMP	30	Α	Р	ROAD RIG FROM NBU 922-32CT TO NBU 1022-5C-4, MIRU, SPOT EQUIP, N/D WELL HEAD, N/U BOPS, P/U 3-7/8 MILL, TALLEY & P/U 190 JNTS 2-3/8 J-55 TBG TAG PBTD @ 9068' CIRC HOLE CLEAN, L/D 34 JNTS ON FLOAT. SWIFN DRAIN EQUIP.
2/20/2009	7:00 - 7:15	0.25	COMP	48		Р	HSM, REVIEW P/U TBG

P

Р

OPEN WELL POOH W/ STNDS 2-3/8 TBG, N/D BOPS, N/U FRAC VALVES, MIRU B&C TESTERS, P/T CSG & FRAC VALVES TO 7500# [GOOD TEST] PREP WELL TO FRAC MON. SWI.

1

HSM, REVIEW WORKING W/ WIRE LINE &

FRACING

7:15 - 15:00

7:00 - 7:15

2/23/2009

7.75

0.25

COMP

COMP

47

48

В

	Ор	eration Sun	nmary Report
Well: NBU 1022-5C-4	Spud Cor	nductor: 1/6/2009	Spud Date: 1/7/2009
Project: UTAH	Site: UIN	ГАН	Rig Name No: KEY 243/243
Event: COMPLETION	Start Date	: 2/19/2009	End Date: 2/25/2009
Active Datum: RKB @5,206.00ft (abov Level)	e Mean Sea	UWI: 0/10/S/22/E/5	5/0/NENW/6/PM/N/1,269.00/W/0/2,606.00/0/0
[18] [18] [18] [18] [18] [18] [18] [18]	ration Phase 'hr)	Code Subco F	/U MD From Operation
7:15 - 7:15	0.00 COMP	36 E F	MIRU CUTTERS & WEATHERFORD FRAC EQUIP,
			STG #1] P/U RIH PERF GUN, PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 9016'-9020' 4 SPF, 90* PH, 16 HOLES, 8970'-8974' 4 SPF, 90* PH, 16 HOLES, 8935'-8938 3 SPF, 120* PH, 9 HOLES. [41 HOLES]

WHP=0#, BRK DN PERFS @ 3196#, INJT PSI=4725#, INJT RT=50.2, ISIP=2624#, FG=.73, PUMP'D 1731.1 BBLS SLK WTR W/ 58050# SAND W/ 4931# RESIN COAT IN TAIL, ISIP=2792#, AR=50.3, AP=4382#, MR=50.5, MP=4858#, NPI=168#, 37/41 CALC PERFS OPEN.

STG #21 P/U RIH W/ BKR 8K CBP & PERF GUN. SET CBP @ 8852', PERF MESAVERDE USING 3-4/8 EXPEND, 23 GRM, 0.36" HOLE, 8819'-8822' 4 SPF, 90\* PH, 12 HOLES, 8762'-8765' 3 SPF, 120\* PH, 9 HOLES, 8732'-8734' 3 SPF, 120\* PH, 6 HOLES, 8706'-8711' 3 SPF, 120\* PH, 15 HOLES, [42 HOLES]

WHP=0#, BRK DN PERFS @ 2687#, INJT PSI=5128#, INJT RT=50.2, ISIP=2096#, FG=68, PUMP'D 4634.3 BBLS SLK WTR W/ 173729# SAND W/ 5023# RESIN COAT IN TAIL, ISIP=2855#. FG=.77, AR=53.5, AP=5055#, MR=54.4, MP=6019#, NPI=759#, 27/42 CALC PERFS OPEN.

STG #3] P/U RIH W/ BKR 8K CBP & PERF GUN. SET CBP @ 8676', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36", 3 SPF, 120\* PH, 8641'-8646' 15 HOLES, 8611'-8616' 15 HOLES, 8544'-8548' 12 HOLES [42 HOLES]

WHP=0#, BRK DN PERFS @ 2785#, INJT PSI=4914#, INJT RT=49.2, ISIP=#, FG=.72, PUMP'D 3318.3 BBLS SLK WTR W/ 128385# SAND W/ 5211# RESIN COAT IN TAIL. ISIP=3076#, FG=.80. AR=49.3, AP=4594#, MR=49.8, MP=5485#, NPI=665# 34/42 CALC PERFS OPEN.

STG #4] P/U RIH W/ BKR 8K CBP & PERF GUN. SET CBP @ 8504', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 8472'-8474' 4 SPF, 90\* PH, 8 HOLES, 8454'-8458' 3 SPF, 120\* PH, 12 HOLES, 8418'-8422' 3 SPF, 120\* PH, 12 HOLES, 8314'-8317 3 SPF, 120\* PH, 9 HOLES, [41 HOLES]

WHP=2520#, BRK DN PERFS @ 4788#, INJT PSI=5820#, INJT RT=51.2, ISIP=2909#, FG=.79, PUMP'D1662 BBLS SLK WTR W/ 63805# SAND W/ 4873# RESIN COAT IN TAIL, ISIP=2777#, FG=.77, AR=51.6, AP=4954#, MR=51.9, MP=6138#, NPI= -132# 28/41 CALC PERFS OPEN.

STG #51 P/U RIH W/ BKR 8K CBP & PERF GUN. SET CBP @ 8240', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 8207'-8210 4 SPF, 90\* PH, 12 HOLES, 8160'-8163' 3 SPF, 120\* PH. 9 HOLES, 8116'-8118' 3 SPF, 120\* PH. 6 HOLES, 8029'-8034' 3 SPF, 120\* PH, 15 HOLES,

Well: NBU 102	22-5C-4		Spud C	onductor	1/6/200	9	Spud Date: 1/	7/2009			
Project: UTAH			Site: UI	NTAH			Rig Name No: KEY 243/243				
Event: COMPL	ETION		Start Da	te: 2/19/2	2009	End Date: 2/25/2009					
Active Datum: Level)	RKB @5,206.00ft (a	above Mean	Sea	UWI: 0/	10/S/22/	22/E/5/0/NENW/6/PM/N/1,269.00/W/0/2,606.00/0/0					
Date	Time	Duration	Phase	Code	Subco	P/U	MD From	Operation			
	Start-End	(hr)			de2	<u> Distriction</u>	(ft)	[42 HOLES]			
								WHP=145#, BRK DN FERFS @ 3035#, INJT PSI=3820#, INJT RT=50, ISIP=2007# FG=.69, PUMP'D 1980.6 BBLS SLK WTR W/ 72147# SAND W/ 5217# RESIN COAT IN TAIL, ISIP=2082#, FG=.70, AR=49.9, AP=3855#, MR=51.1, MP=3860# NPI=77#, 42/42 CALC PERFS OPEN.  STG #6] P/U RIH W/ BKR 8K CBP & PERF GUN.			
2/24/2009	7:00 - 7:15	0.25	COMP	48		P		SET CBP @ 7854, PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE,7822'-7824' 4 SPF, 90* PH, 8 HOLES, 7735'-7738' 4 SPF, 90* PH 12 HOLES, 7699'-7703' 3 SPF 120* PH, 12 HOLES 7598'-7602' 3 SPF, 120* PH, 12 HOLES, [44 HOLES] PICKLE WELL, SWIFN. HSM. TRIPPING IN HOLE			
	7:15 - 17:00	9.75	COMP	36	E	Р		OPEN WELL FRAC STG #6] IN MESAVERDE 7598'-7824' [44 HOLES] WHP=1225#, BRK DN PERFS @ 2990#, INJT PSI=4300#, INJT RT=50.3, ISIP=2338#, FG=.74, PUMP'D 2202.2 BBLS SLK WTR W/ 81323# SAND W/ 3742# RESIN COAT IN TAIL, ISIP=2529#, FG=.77, AR=50.3, AP=3976#, MR=50.7, MP=5998#, NPI=191#, 42/44 CALC PERFS OPEN.			
								STG #7] P/U RIH W/ BKR 8K CBP & PERF GUN. SET CBP @ 7528', PERF MESAVERDE USING 3-3/8 EXPEND, 23 GRM, 0.36" HOLE, 7822'-7824' 4 SPF, 90* PH, 8 HOLES, 7735'-7738' 4 SPF, 90* PH, 12 HOLES, 7699'-7703' 3 SPF, 120* PH, 12 HOLES, 7598'-7602' 3 SPF, 120* PH, 12 HOLES, [44 HOLES]			
								WHP=0#, BRK DN PERFS @ 3650#, INNJT PSI=3938#, INJT RT=50, ISIP=1566#, FG=.65, PUMP'D 1329 BBLS SLK WTR W/ 47648# SAND N 3122# RESIN COAT IN TAIL, ISIP=1916#, FG=.70, AR=50.2, AP=3761#, MR=50.8, MP=4776#, NPI=350#, 36/44 CALC PERFS OPEN.			
2/25/2009	7:00 - 7:15	0.25	COMP	48		Р		P/U RIH W/ BKR 8K CBP & SET @ 7200', POOH, R/D CUTTERS & WEATHERFORD FRAC EQUIP, N/D FRAC VALVES, N/U BOPS, R/U TBG EQUIP, P/U 3-7/8 BIT W/ POBS PKG, RIH W/ 2-3/8 J-55 TBG, TAG KILL PLUG @ 7200' P/U PWR SWVL PREP TO DRL IN A.M. SWIFN. HSM, DRL PLUGS			

# Operation Summary Report

Well: NBU 102	22-5C-4		Spud Co	onductor:	1/6/2009	Spud Date: 1	/7/2009
Project: UTAH			Site: UIN	NTAH			Rig Name No: KEY 243/243
Event: COMPL	ETION		Start Da	te: 2/19/2	:009		End Date: 2/25/2009
Active Datum: Level)	RKB @5,206.00ft (a	above Mean (	Sea	UWI: 0/	10/S/22/E/5	/0/NENW/6/PM/N/1	,269.00/W/0/2,606.00/0/0
Date	Time Start-End	Duration (hr)	Phase	10.34	de2	/U MD From (ft)	Operation
	7:15 - 17:00	9.75	COMP	44	C F	•	OPEN WELL, 0# C SICP, 0# SITP, EST CIRC W/ RIG PUMP. PLUG #1] TAG PLUG @ 7200' DRL THROUGH BKR 8K CBP IN 10 MIN, 300# INCREASE.
							PLUG #2] CONTINUE TO RIH TAG SAND @ 74987' [30' FILL] C/O & DRL THROUGH BKR 8K CBP @ 7527' IN 10 MIN. 600# INCREASE.
							PLUG #3] CONTINUE TO RIH TAG SAND @ 7824' [30' FILL] C/O & DRL THROUGH BKR 8K CBP@ 7854' IN 10 MIN. W/ 600# INCREASE.
							PLUG #4] CONTINUE TO RIH, TAG SAND @ 8230' [30' FILL] C/O & DRL THROUGH BKR 8K CBP @ 8240' IN 10 MIN. W/ 200# INCREASE.
							PLUG #5] CONTINUE TO RIH, TAG SAND @ 8530' [30' FILL] C/O & DRL THROUGH BKR 8K CBP @ 8540' IN 10 MIN. W/ 500# INCREASE.
							PLUG #6] CONTINUE TO RIH, TAG SAND @ 8646' [30' FILL] C/O & DRL THROUGH BKR 8K CBP @ 8676' IN 10 MIN. W/ 400# INCREASE.
							PLUG #7] CONTINUE TO RIH, TAG SAND @ 8840' [12' FILL] C/O & DRL THROUGH BKR 8K CBP @ 8852' IN 10 MIN. W/ 200# INCREASE. CONTINUE TO RIH C/O TO PBTD @ 9068' CIRC HOLE, R/D PWR SWVL. L/D 27 JNTS ON FLOAT P/U 4-1/16 HANGER LAND W/ 276 JNTS 2-3/8 J-55 TBG @ 8664.47, R/D TBG EQUIP, N/D BOPS, N/U WELL HEAD, DROP BALL, PUMP OFF BIT W/ 2300#, LEAVE WELL SUT IN FOR 30 MIN. OPEN WELL UP TO PIT TURN OVER TO F/B CREW.
2/26/2009	7:00 -			33	Α		RDMO. 7 AM FLBK REPORT: CP 3300#, TP 2600#, 20/64" CK, 75 BWPH, 3/4 CUP SAND, - GAS TTL BBLS RECOVERED: 3473
2/27/2009	7:00 -		PROD	33	Α		TTL BBLS LEFT TO RECOVER: 13385
2,2,,2000	7:00 -		. 1.05	33	A		7 AM FLBK REPORT: CP 3700#, TP 2600#, 20/64" CK, 48 BWPH, - CUP SAND, - GAS TTL BBLS RECOVERED 4787 TTL BBLS LEFT TO RECOVER: 12071
	9:00 -		PROD				WELL TURNED TO SALES @ 0900 HR ON 2/27/2009 - FTP 3200#, CP 3700#, CK 20/64", 3000
2/28/2009	7:00 -			33	Α		MCFD, 1152 BWPD 7 AM FLBK REPORT: CP 3600#, TP 2650#, 20/64" CK, 27 BWPH, - SAND, - GAS TTL BBLS RECOVERED: 5636
3/1/2009	7:00 -			33	Α		TTL BBLS LEFT TO RECOVER: 11222 7 AM FLBK REPORT: CP 3400#, TP 2550#, 20/64" CK, 20 BWPH, CLEAN SAND, - GAS TTL BBLS RECOVERED: 6160

3/2/2009 3:22:33PM



# UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

WELL	COMPI	ETION	$\cap P P$	FCOMD	FTION	REPORT	LOG

	WELL	COMPL	ETION C	R REC	OM	IPLETIC	ON R	EPORT	AND LOG	i	Ì		ase Serial I TU01195	Vo.	
1a. Type o	f Well   f Completion	_	<b>⊠</b> Gas \tem Well	☐ Work	Dr Ove		Other eepen	☐ Plug	Back 🗖 I	Diff. R	esvr.	7. U1		greeme	Tribe Name ent Name and No.
2. Name of	f Operator MCGEE OII		ONSHORE		) نادانم	Contact: S	HEILA	UPCHEG	Ю			8. Le	ase Name a	and We	
3. Address	1368 SOL	JTH 1200	EAST	191all. 311	Glia.t	арспедоц	3a.		o. (include area	code)			PI Well No.		43-047-38522
4. Location	VERNAL, a of Well (Re			d in acco	rdanc	e with Fed						10. F	ield and Po	ol, or I	Exploratory
At surfa	ace NENW	/ Lot 3 12	269FNL 260	6FWL								11. S	ATURAL I ec., T., R.,	M., or	Block and Survey
At top p	orod interval	_				9FNL 260	6FWL				ļ		Area Secounty or P		OS R22E Mer SLB
At total		NW Lot 3	1269FNL 2			ed		16 Date	Completed			U	INTÁH		UT RT GL)*
14. Date Spudded 01/06/2009 15. Date T.D. Reached 02/02/2009 16. Date Completed 17. Elevations (DF, KB, RT, GL)* 5188 GL 02/27/2009 17. Elevations (DF, KB, RT, GL)* 5188 GL										, ici, GD)					
18. Total Depth: MD 7VD 19. Plug Back T.D.: MD 7VD 20. Depth Bridge Plug Set: MD TVD TVD															
CBL-C SD	DSN	AC	TR_			oy of each)			1	Was I	well cored OST run? tional Sur	? vey?	🛛 No	🗖 Yes	(Submit analysis) (Submit analysis) (Submit analysis)
23. Casing at Hole Size	Size/G		Wt. (#/ft.)	Top (MD)	Ţ	Bottom (MD)		e Cementer Depth	No. of Sks Type of Cer		Slurry (BB		Cement 7	Гор*	Amount Pulled
20.000	14.000	STEEL	36.7	(3.22)		40	+		- 7	28					
12.250 7.875	<del></del>	000 J-55 500 I-80	36.0	36.0 2430 750 11.6 9125 1640											
7.010	4.	300 1-80	11.0			9120				1040					
<del></del>	ļ				+										
24. Tubing	Record														
Size 2.375	Depth Set (M	4D) P 8664	acker Depth	(MD)	Size	e Dep	th Set (	MD) P	acker Depth (N	MD)	Size	De	pth Set (MI	D)   ]	Packer Depth (MD)
	ng Intervals					26	. Perfo	ration Reco	ord						
A)	ormation MESAVE	RDE	Тор	7250	Botte	9020		Perforated	Interval 7250 TO 90	20	Size 0.30		lo. Holes 296	OPEN	Perf. Status
	SMVD			7200		0020									
C) D)		$\dashv$										╁			
27. Acid, Fi	racture, Treat		nent Squeeze	, Etc.										'	
	Depth Interva 72	al 250 TO 90	020 PMP 16	,858 BBL	SSLIC	CK H2O &	591,414	Aı 4# 30/50 O	mount and Typ FTOWA SD	e of M	laterial				
			<del></del>				-								
	ion - Interval		I True	0.1	1.0		W-4	Louis		los-		Dun d	on Moth- d		
Date First Produced 02/27/2009	Test Date 03/03/2009	Hours Tested 24	Test Production	Oil BBL 1.0	- 1		Water BBL 600	Oil Gr Corr.		Gas Gravity		rioaucti	on Method FLOV	VS FRC	DM WELL
Choke Size 16/64	Tbg. Press. Flwg. 366 SI	Csg.	24 Hr. Rate	Oil BBL	Ga	as	Water BBL 600	Gas:O Ratio	il	Well S	tatus PGW	, , , , , , , , , , , , , , , , , , ,			N
28a. Produc	ction - Interva	ıl B													
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Ga M		Water BBL	Oil Gi Corr.		Gas Gravity		Producti	on Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL		ias ICF	Water BBL	Gas:O Ratio	ril	Well S	tatus			<u> </u>	RECEIVE
(See Instruct		and for ad	ditional data	011 11011011	a side	(a)		J				_			<del> APR 2-0-2</del> 00

28b. Prod	uction - Interv	al C											
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Ga Gr	as ravity	Production Method			
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	w	ell Status	<u> </u>			
28c. Produ	uction - Interv	al D											
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Ga Gr	as ravity	Production Method			
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	W	Well Status				
29. Dispos	sition of Gas(S	Sold, used	for fuel, vent	ed, etc.)	•								
	ary of Porous	Zones (Inc	lude Aquife	rs):					31. For	mation (Log) Marke	rs		
Show tests, i	all important	zones of po	orosity and c	ontents there	eof: Cored in tool open,	ntervals and a flowing and	all drill-stem shut-in pressure	s _	:				
	Formation		Тор	Bottom		Description	ns, Contents, etc	·		Name		Top Meas. Depth	
GREEN R BIRDS NE MAHOGA WASATCH MESAVEF	ST NY H	(include pl	1311 1635 2132 4547 7118	7018 9049 edure):									
1. Ele 5. Sur	enclosed attac ectrical/Mecha ndry Notice fo	nical Logs r plugging	and cement	verification		2. Geologic 6. Core Ana	lysis		3. DST Rep 7 Other:	·	l. Direction		
34. I hereb	by certify that	the forego	Elect	ronic Subn	ission #689	24 Verified	rect as determine by the BLM W ONSHORE L,	ell Info	rmation Sys	records (see attache	d instruction	ns):	
Name	(please print)	SHEILA I	JPCHEGO	2/	<del></del>		Title C	PERA]	TIONS				
Signat	ure	K John	de prodesi	OR) /	MA	U	<b>2</b> Date <u>0</u>	4/15/20	009				
Title 18 U	S.C. Section	1001 and	Title 43 U.S.	C. Section 1	212, make i	t a crime for	any person knov	wingly a	nd willfully	to make to any depa	rtment or ag	gency	
of the Uni	ted States any	false, ficti	tious or frad	ulent statem	ents or repre	esentations a	s to any matter v	within its	s jurisdiction	L. , , , ,			

Do not use this form for proposition bottom-hole depth, reenter plu DRILL form for such proposals.  1. TYPE OF WELL Gas Well  2. NAME OF OPERATOR:		N WELLS isting wells below current	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195  6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  7.UNIT OF CA AGREEMENT NAME: NATURAL BUTTES  8. WELL NAME and NUMBER: NBU 1022-5C-4  9. API NUMBER:						
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th S	43047385220000  9. FIELD and POOL or WILDCAT: NATURAL BUTTES								
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1269 FNL 2606 FWL QTR/QTR, SECTION, TOWNSHI Qtr/Qtr: NENW Section: 05  11. CHE	NATURE OF NOTICE, REPORT,	COUNTY: UINTAH  STATE: UTAH  OR OTHER DATA							
TYPE OF SUBMISSION		TYPE OF ACTION							
The operator request on the subject we	ACIDIZE  CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  MPLETED OPERATIONS. Clearly show all perting approval to conduct wellhead Il location. Please find the attached repair work on the subject well approved to conduct wellhead Il location.	/casing repair operations ned procedures for the	Accepted by the Utah Division of						
<b>NAME (PLEASE PRINT)</b> Gina Becker	<b>PHONE NUMBER</b> 720 929-6086	TITLE Regulatory Analyst II	Oil, Gas and Mining  ate: 03/10/2011  y:						
SIGNATURE N/A		<b>DATE</b> 3/9/2011							

#### WORKORDER #: 88122151

Name: NBU 1022-5C-4 3/4/11

Surface Location: NENW SEC.5 T10S, R22E

Uintah County, UT

**API:** 4304738522 **LEASE#:** UTU-01195

**ELEVATIONS:** 5188' GL 5206' KB

**TOTAL DEPTH:** 9125' **PBTD:** 9068'

**SURFACE CASING:** 9 5/8", 36# J-55 @ 2430'

**PRODUCTION CASING:** 4 1/2", 11.6#, I-80 @ 9125'

T.O.C.@ 700 per CBL

**PERFORATIONS:** Mesaverde 7250' – 9020'

Tubular/Borehole	Drift	Collapse	Burst	Capacities			
	inches	psi	psi	Gal./ft.	Cuft/ft.		Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624		0.02173	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528		0.0872	0.01554
9.625" 36# J-55	8.921	2020	3520	3.247		0.434	0.0773
Annular Capacities							
2.375" tbg. X 4 ½" 11.6#	0.4227	0.0565		0.01006			

#### **GEOLOGICAL TOPS:**

1311' Green River

1635' Bird's Nest

2132' Mahogany

4547' Wasatch

7118' Mesaverde

#### NBU 1022-5C-4 - WELLHEAD REPLACEMENT PROCEDURE

#### PREP-WORK PRIOR TO MIRU:

- 1. Dig out down to the 2" surface casing valve or to the valve on the riser off the surface casing.
- 2. Install a tee with 2 valves, with a pressure gauge and sensor on one valve.
- 3. Open casing valve and record pressures.
- 4. Install nipple and steel hose on the other valve, the relief valve,. Do not use hammer unions. No impact equipment or tools to be used for any of this installation. Extend hose and hard piping to a downwind location at least 100' from the wellhead. Consider installing a manifold so that vent area could be in two locations approx. 90 degrees apart from the wellhead.
- 5. Open the relief valve and blow well down to the atmosphere.
- 6. Make a determination of amount of gas flow, either by installation of a choke nipple, bucket test or other.
- 7. Shut well in. Observe for rate of build-up by utilizing sensor data. Do not build-up for more than 24 hours. Vent gas through the vent line and leave open to the atmosphere.

#### **WORKOVER PROCEDURE:**

- 1. MIRU workover rig.
- 2. Kill well with 10# brine / KCL (dictated by well pressure ).
- 3. Remove tree, install double BOP with blind and 2 3/8" pipe rams, with accumulator closing unit and manual back-ups. Function test BOP system.
- 4. Pooh w/ tubing.
- 5. Rig up wireline service. RIH and set CBP @ ~7200'. Dump bail 4 sx cement on top of plug. POOH and RD wireline service.
- 6. Remove BOP and ND WH.
- 7. Depending on conditions at wellsite, continue with either CUT/PATCH Procedure or BACK-OFF Procedure.

#### **CUT/PATCH PROCEDURE:**

- 1. PU internal casing cutters and RIH. Cut casing at +/- 30' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 1 joint of 3 ½" IF drill pipe with 4 ½" right hand standard grapple overshot. Pull a minimum of 10,000# to keep grapple engaged if cement top is high (<~900'). If cement top is low (>~900'), more weight will be required to put casing in neutral. Torque casing string to +/- 7000 ft-lbs, count number of turns to make-up, and document in the daily report. Release overshot, POOH, and lay down.
- 4. PU & RIH w/  $4\frac{1}{2}$ " 10k external casing patch on  $4\frac{1}{2}$ " I-80 or P-110 casing.
- 5. Latch fish, PU to 100,000# tension. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
- 6. Install C-22 slips. Land casing w/ 80,000# tension.
- 7. Cut-off and dress 4 ½" casing stub.
- 8. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7150'. Clean out to PBTD (9068').
- 9. POOH, land tbg and pump off POBS.
- 10. NUWH, RDMO. Turn well over to production ops.

#### **BACK-OFF PROCEDURE:**

- 1. PU internal casing cutters and RIH. Cut casing at +/- 6' from surface.
- 2. POOH, LD cutters and casing.
- 3. PU 4 ½" overshot. RIH, latch fish. Pick string weight to neutral.
- 4. MIRU wireline services. RIH and shoot string shot at casing collar @ 46'.
- 5. MIRU casing crew.
- 6. Back-off casing, POOH.
- 7. PU new casing joint w/ entry guide and RIH. Tag casing top. Thread into casing and torque up to +/- 7000 ft-lbs, count number of additional turns to make-up, and document in the daily report.
- 8. PU 100,000# tension string weight. RU B&C. Cycle pressure test to 7,000# / 9,000# psi.
- 9. Install C-22 slips. Land casing w/ 80,000# tension.

- 10. Cut-off and dress 4 ½" casing stub.
- 11. NUWH. PU 3 7/8" bit, POBS and RIH. D/O cement and plug ~7150'. Clean out to PBTD (9068').
- 12. POOH, land tbg and pump off POBS.
- 13. NUWH, RDMO. Turn well over to production ops.

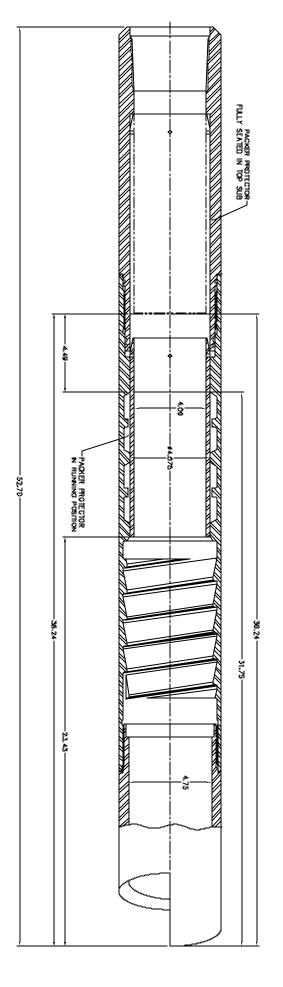


# **Logan High Pressure Casing Patches Assembly Procedure**

All parts should be thoroughly greased before being assembled.

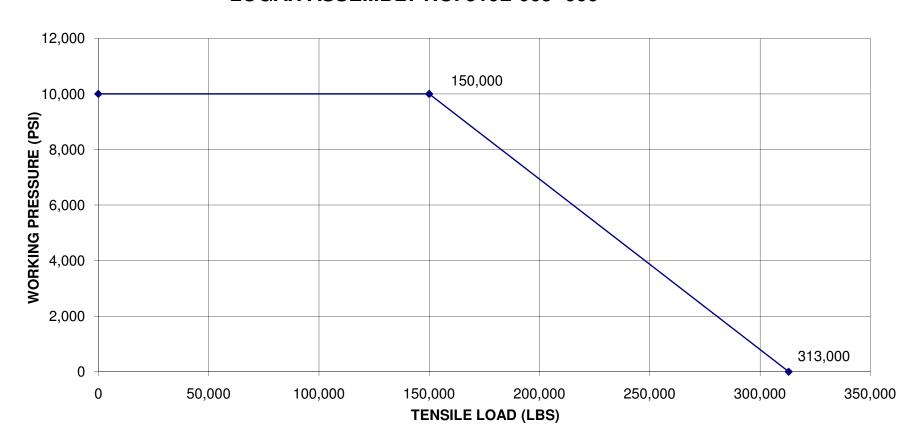
- 1. Install all four Logan Type "L" Packers in the spaces provided in the Casing Patch Bowl. Refer to diagram provided for proper installation.
- 2. Install Packer Protector from the Basket Grapple end of the Bowl. The beveled end of the Packer Protector goes in first. Carefully push the Packer Protector through the four Type "L" Packers.
- 3. Align Shear Pin Holes in Packer Protector so that the holes have just passed into the counter bore at the Top Sub end, refer to diagram. The Packer Protector is provided with four Shear Pin Holes. Use only two holes, 180 degrees apart and install the pins.
- 4. Screw the Basket Grapple in from the lower end of the Bowl, using left-hand rotation. The Tang Slot in the Basket Grapple must land in line with the slot in the Bowl.
- 5. Insert the Basket Grapple Control into the end of the Bowl. Align Tang on the Basket Grapple Control with the Tang Slot of the Bowl and Basket Grapple. This secures the Bowl and the Basket Grapple together.
- 6. Install the Cutlipped Guide into the lower end of the Bowl.
- 7. Install O-Rings on the two five-foot long Extensions. Screw the first Extension into the top end of the Bowl. Screw the second Extension into the top end of the first Extension.
- 8. Install O-Ring on Top Sub. Screw Top Sub into top end of second Extension.

Follow recommended Make-Up Torque as provided in chart.



510L-005-001 4-1/2" LOGAN HP CASING PATCH

# STRENGTH DATA FOR LOGAN 5.88" OD "L" TYPE CSG PATCH 4-1/2 CASING, 10K PSI MAX WP 125K YIELD MAT'L LOGAN ASSEMBLY NO. 510L-005 -000



COLLAPSE PRESSURE: 11,222 PSI @ 0 TENSILE 8,634 PSI @ 220K TENSILE

Tensile Strength @ Yield: Tensile Strength w/ 0 Int. Press.= 472,791lbs. Tensile Strength w/ 10K Int. Press.= 313,748lbs. Sundry Number: 39174 API Well Number: 43047385220000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

	STATE OF UTAH		FORM 9
ı	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Do not use this form for procurrent bottom-hole depth, IFOR PERMIT TO DRILL form	posals to drill new wells, significantly reenter plugged wells, or to drill horizon for such proposals.	deepen existing wells below ntal laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-5C-4		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047385220000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 73779 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1269 FNL 2606 FWL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<mark>HP, RANGE, MERIDIAN:</mark> 05 Township: 10.0S Range: 22.0E Merio	dian: S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
6/18/2013	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT	DEEPEN	FRACTURE TREAT	NEW CONSTRUCTION
Date of Work Completion:	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:			<u> </u>
Date of Spud.	☐ REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	▼ TEMPORARY ABANDON
	L TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
DRILLING REPORT Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
12. DESCRIBE PROPOSED OR The operator reques well location. Th subject well to d following well: 1022-5C4			
NAME (PLEASE PRINT)	PHONE NUMB		
Luke Urban	720 929-6501	Regulatory Specialist	
<b>SIGNATURE</b>   N/A		<b>DATE</b> 6/18/2013	

Well Name: <u>NBU 1022-5C-4</u> 6/12/13

Surface Location: NESWNW Sec. 5, T10, R22E

Uintah County, UT

#### Recommended action for disposition of well bore:

This well will be temporarily abandoned to accommodate drilling operations in one of 2 ways. We will either plug the wellbore as outlined in the attached procedure or Shut-In in the following manner: a) Set a tubing plug near EOT, install a flange over the tbg hanger, removal of master valve, set VR plugs in casing head at surface, and removal of casing wing valves, replaced with blind flanges.

**API:** 4304738522 **LEASE#:** UTU-01195

**ELEVATIONS:** 5188' GL 5206' KB

**TOTAL DEPTH:** 9125' **PBTD:** 9068'

**SURFACE CASING:** 9 5/8"\*, 36# J-55 @ 2430' (KB)

\*BLM Completion report incorrectly states 10" Surface Csg

**PRODUCTION CASING:** 4 1/2", 11.6# I-80 @ 9125'

TOC @ ~700 per CBL

**PRODUCTION TUBING:** 2 3/8" J-55, EOT @ 8683' (WOV rpt dated 4/3/12)

**PERFORATIONS:** MESAVERDE 7250' – 9020'

Tubular/Borehole	_	Collapse	Burst psi	Capacities	es		
	inches	psi		Gal./ft.	Cuft/ft.		Bbl./ft.
2.375" 4.7# J-55 tbg.	1.901	8100	7700	0.1624	(	0.02171	0.00387
4.5" 11.6# I-80	3.875	6350	7780	0.6528		0.0872	0.0155
9.625" 36# J-55	8.765	2020	3520	3.247		0.434	0.0773
Annular Capacities							
2.375" tbg. X 4 ½" 11.	.6# csg			0.4227	0.0565		0.01
4.5" csg X 9 5/8" 36#	csg			2.227	0.2977		0.053
4.5" csg X 7.875 borehole 1.704 0.2278						0.0406	
9.625" csg X 12 1/4" k	oorehole			2.3428	0.3132		0.0558

#### **GEOLOGICAL TOPS:**

4547' Wasatch 7118' Mesaverde

RECEIVED: Jun. 18, 2013

#### NBU 1022-5C-4 TEMPORARY ABANDONMENT PROCEDURE

#### **GENERAL**

- H2S MAY BE PRESENT. CHECK FOR H2S AND TAKE APPROPRIATE PRECAUTIONS.
- CEMENT QUANTITIES BELOW ASSUME NEAT CLASS G, YIELD 1.145 CUFT./SX. IF A DIFFERENT PRODUCT IS USED, WELLSITE PERSONNEL ARE RESONSIBLE FOR CORRECTING QUANTITIES TO YIELD THE STATED SLURRY VOLUME. WHEN SQUEEZING, INCLUDE 10% EXCESS PER 1000' OF DEPTH.
- TREATED FRESH WATER WILL BE PLACED BETWEEN ALL PLUGS INSTEAD OF BRINE.
- ALL DISPLACEMENT FLUID SHALL CONTAIN CORROSION INHIBITOR AND BIOCIDE. PREMIX 5 GALLONS PER 100 BBLS FLUID.
- NOTIFY BLM/UDOGM 24 HOURS BEFORE MOVING ON LOCATION.

#### **PROCEDURE**

Note: An estimated 26 sx of cement needed to perform procedure.

- 1. MIRU. KILL WELL AS NEEDED (TO INCLUDE SURFACE CSG PRESSURE). ND WH, NU AND TEST BOPE.
- 2. RU WIRELINE. ENSURE WELLBORE IS CLEAN. A GPS READING WILL NEED TO BE TAKEN AT THE WELL SITE AND RECORDED IN OPENWELLS. PLEASE TAKE IT TO THE 6TH DECIMAL PLACE.
- 3. RUN GYRO SURVEY.
- 4. PLUG #1, ISOLATE MV/WAS PERFORATIONS (7250' 9020'): RIH W/ 4 ½" CBP. SET @ ~7200'. RELEASE CBP, PUH 10', BRK CIRC W/ FRESH WATER. PRESSURE TEST CASING TO 500 PSI. INFORM ENGINEERING IF IT DOESN'T TEST. DISPLACE A MINIMUM OF 8 SX/ 1.6 BBL/ 8.7 CUFT. ON TOP OF PLUG. PUH ABOVE TOC (~7100'). REVERSE CIRCULATE W/ TREATED FRESH WATER (~36 BBLS).
- 5. PLUG #2, PROTECT TOP OF WASATCH (4547'): PUH TO ~4660'. BRK CIRC W/ FRESH WATER. DISPLACE A MINIMUM OF 18 SX / 3.6 BBL / 20.1 CUFT AND BALANCE PLUG W/ TOC @ ~4430' (230' COVERAGE). PUH ABOVE TOC. REVERSE CIRCULATE W/ TREATED FRESH WATER (~69 BBLS).
- 6. LOWER WELLHEAD TO GROUND LEVEL TO ACCOMMODATE DRILLING OPS AND INSTALL MARKER PER UDOGM GUIDELINES.
- 7. RDMO. TURN OVER TO DRILLING OPERATIONS.

ALM 6/12/13

RECEIVED: Jun. 18, 2013

	STATE OF UTAH		FORM 9		
ι	DEPARTMENT OF NATURAL RESOURG DIVISION OF OIL, GAS, AND MII		5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195		
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:				
	oposals to drill new wells, significantly reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT OF CA AGREEMENT NAME: NATURAL BUTTES		
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: NBU 1022-5C-4		
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047385220000		
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 8021	<b>PHONE NUMBER:</b> 7 3779 720 929-6	9. FIELD and POOL or WILDCAT: 1NATURAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1269 FNL 2606 FWL			COUNTY: UINTAH		
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 05 Township: 10.0S Range: 22.0E Mer	idian: S	STATE: UTAH		
11. CHECK	K APPROPRIATE BOXES TO INDICA	TE NATURE OF NOTICE, REPOR	RT, OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
	ACIDIZE	ALTER CASING	CASING REPAIR		
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME		
Approximate date work will start.	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE		
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION		
12/30/2013	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK		
	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION		
SPUD REPORT Date of Spud:					
	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	▼ TEMPORARY ABANDON		
DRILLING REPORT	L TUBING REPAIR	☐ VENT OR FLARE ☐	☐ WATER DISPOSAL		
Report Date:	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION		
	WILDCAT WELL DETERMINATION	OTHER	OTHER:		
The operator has co the subject well I order to expand an attached chro	completed operations. Clearly show oncluded the temporary aba ocation on 12/30/2013. Thi nd drill the NBU 1022-5C Pa onological well history for de	indonment operations on s well was plugged in d wells. Please see the etails. Thank you.			
NAME (PLEASE PRINT) Teena Paulo	<b>PHONE NUME</b> 720 929-6236	BER TITLE Staff Regulatory Specialist			
SIGNATURE N/A		<b>DATE</b> 2/12/2014			

US ROCKIES REGION  Operation Summary Report										
Well: NBU 1022-5C-4 Spud Conductor: 1/6/2009 Spud Date: 1/7/2009										
Project: UTAH-U	IINTAH			Site: NBU	1022-50	C-4			Rig Name No: SWABBCO 6/6	
Event: ABANDO	NMENT			Start Date	e: 9/30/20	)13			End Date: 12/30/2013	
Active Datum: RI	KB @5,2	206.00usft (a	bove Mean S	ea	UWI: 0/	10/S/22/E	5/5/0/NEN	W/6/PM/N/1,269.	.00/W/0/2,606.00/0/0	
Date	s	Time tart-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation	
12/26/2013	7:00	- 7:30	0.50	ABANDT	48		Р		ROADING RIG	
	7:30	- 18:02	10.53	ABANDT	45	Α	Р		ROAD RIG FROM NBU 12-28B TO LOC, RU, CALLED FOR WTR 10:30 AM, WTR ARRIVED AT 4:30 -M, TRK FROZE UP, COULDN'T UNLOAD, SWIFN	
12/27/2013	7:00	- 7:30	0.50	ABANDT	46		Р		SCAN TBG	
	7:30	- 16:00	8.50	ABANDT	45	A	P	P KILL WELL,NDWH, NU BOP'S, TEST BOP'S, RU SCAN TECH, UNLAND TBG, SCAN TBG OOH,ST BACK 113 STDS, LAY BALANCE ON TLR, RU CUTTERS, TIH GAUGE RING 7220', POOH PU 8 CBP, TIH SET AT 7200', POOH, TIH 113 STDS TE TAG 8K CBP, BREAK CIRC, TEST CSG TO 500#.SWIFWE		
12/30/2013	7:00	- 7:30	0.50	ABANDT	48		Р		TRIPPING TBG	
	7:30	- 17:00	9.50	ABANDT	31	I	P		BREAK CIRC, TEST CSG TO 500#, RU PRO PETRO, SET 2 CEMENT PLUGS, LAY DWN TBG ON TLR, CALL FMC, REMOVE WH, RDMO  PLUG# 1 8K CB 7200' SET 10SX, 2 BBLS, CEMENT ON CBP, DISLPACE WITH 1 BBL FRESH, 26 BBLS TREATED T-MAC  PLUG# 2 4660' CEMENT PUMP 2.5 BBLS FRESH, 20 SX, 4.1 BBLS CEMENT, DISPLACE WITH 1 BBL FRESH, 15.9 BBLS TREATED T-MAC, ALL CEMENT USED IS CLASS G, YIELD 1.145, DENISTY 15.8#/GAL.  GRYO RAN AUG 16TH, 2009 N 39.98179W 109.46315 ELEV 5206'	
12/31/2013	7:00	-							REMOVE PRODUCTION FACILITIES TO PREPARE LOCATION FOR PAD DRILLING	

2/11/2014 9:46:36AM 1

Sundry Number: 51432 API Well Number: 43047385220000 FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING  SUNDRY NOTICES AND REPORTS ON WELLS  Do not use this form for proposals to drill new wells, significantly deepen existing wells below more steamers, remer plugged wells, or to drill herizantal intertals. Use APPLICATION PROFESSION PROPERTY TO DRILL form for laudh proposals.  1. Type OF WELL  Gas Well  2. NAME OF DEPARTOR:  2. NAME OF DEPARTOR:  3. APPLICATION:  NEU 1022-5C-4  NBU 1022-5C-4  NBU 1022-5C-4  NBU 1022-5C-4  NBU 1022-5C-4  1. SAPTHUMBER:  NBU 1022-5C-4  NBU 1022-5C-4  NBU 1022-5C-4  1. SAPTHUMBER:  NBU 102		STATE OF UTAH		FORM 9		
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.  1.179E OF WELL Gas Well  2. NAME of OPERATOR: 4.179E OF DWELL GAS Well  3. ADDRESS OF OPERATOR: 4.20 APP NUMBER: 4.30 47.385520000  3. ADDRESS OF OPERATOR: 4.30 AT 385520000  3. APPLIANTED AND ADDRESS OF OPERATOR: 4.30 AT 385520000  3. APPLIANTED AND ADDRESS OF OPERATOR: 4.30 AT 385520000  3. APPLIANTED ADDRESS OF OPERATOR: 4.30 AT 385520000  3. ADDRESS OF OPERATOR: 4.30 AT 385520000  3. APPLIANTED ADDRESS OF OPERATOR: 5. CLEANTED ADDRESS OF OPERATOR OPERATOR ADDRESS OF OPERATOR OPERATO			G			
DUTEN DATION FOR DETERMINED TO PRODUCE FOR PERMIT OF DATA  1.17PE OF WELL  3. ADDRESS OF OPERATOR:  4. APP NUMBER:  4. APP NUM	SUNDF	RY NOTICES AND REPORTS ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
Cas Well  INSU 1022-5C-4  INSU 3047383220000  INSU 3047383220000  INSU 1022-5C-4  INSU 3047383220000  INSU 3047383220000  INSU 3047383220000  INSU 34004738220000  INSU 34004738220000  INSU 34004738220000  INSU 34004738200000  INSU 1022-5C-4  INSU 340047378 SCETON INSU INSU INSU INSU INSU INSU INSU INS	current bottom-hole depth,					
ADDRESS OF OPERATOR:  PHONE NUMBER: PLO. BOX 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779 720 929- € INSTREMENT BUTTES  4. LOCATION OF WELL PROTOTAGES AT SURFACE: 1269 FNL. 2905 FVL. 1269 FNL. 2905 FVL. 12705 FNL. 2905 FVL. 1						
P.O. BOX 173779 1099 18th Streat, Suite 600, Denver, CO, 80217 3779  720 929-6 HEAL BUTTES  COUNTY: UNITAH  1726 FALS 2006 FWL OTR/OTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: COTR/OTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  TYPE OF SUBMISSION  TYPE OF SUBMISSION  TYPE OF ACTION  ACDIZE  ACDIZE  ACROSS REPAIR  ACROSS GRANE  ACROSS GRANE  ACROSS GRANE  GOMMOR TURNO  ACROSS GRANE  GOMMOR TURNO  ACROSS GRANE  GOMMOR TURNO  ACROSS GRANE  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TOWN TURNO  GOMMOR TOWN TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TOWN TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TURNO  GOMMOR TOWN TURNO  GOMMOR TURNO  GOMM		NSHORE, L.P.				
TOTAGES AT SURFACE: 1269 FNL 2606 FWL OTRAITR, SECTION, TOWNSHIP, RANGE, MERIDIAN: OTHORY, SECTION, TOWNSHIP, RANGE, MERIDIAN: OTHORY SECTION, TOWNSHIP, TOWNSHIP						
Otr/Otr: NENW Section: 05 Township: 10.0S Range: 22.0E Meridian: S  11.  CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA  TYPE OF SUBMISSION  TYPE OF ACTION  ACROIZE ALTER CASING CHANGE TURNOT CHANGE WILL STATUS C	FOOTAGES AT SURFACE:					
TYPE OF SUBMISSION  TYPE OF ACTION    NOTICE OF INTERT			: S	-		
ACIDIZE   ALTER CASING   CASING REPAIR		K APPROPRIATE BOXES TO INDICATE N	NATURE OF NOTICE, REPOR	T, OR OTHER DATA		
ADDITE OF INTENT Approximate day work will start: 5/22/2014    CHANGE WELL STATUS	TYPE OF SUBMISSION		TYPE OF ACTION			
	Approximate date work will start:  5/22/2014  SUBSEQUENT REPORT Date of Work Completion:  SPUD REPORT Date of Spud:  DRILLING REPORT Report Date:  12. DESCRIBE PROPOSED OR The operator roperations on the re	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  COMPLETED OPERATIONS. Clearly show all pequests authorization to conductive to conductive the country of the conductive to complete the country of t	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  COMMINGLE PRODUCING FORMATIONS  DEEPEN  FRACTURE TREAT  OPERATOR CHANGE  PLUG AND ABANDON  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  OTHER  MPLETED OPERATIONS. Clearly show all pertinent details including dates, or uests authorization to conduct recompletion enced well. Please see the attached recompletion atte courtesy copy for the referenced Federal Well.			
Matthew P Wold         720 929-6993         Regulatory Analyst I           SIGNATURE         DATE           N/A         5/22/2014	SIGNATURE	720 929-6993	DATE			



## **Greater Natural Buttes Unit**

NBU 1022-5C-4
RE-COMPLETION PROCEDURE
NBU 1022-5C PAD
FIELD ID: RED WELL

DATE: 5/20/2014 AFE#: 2024578

API#: 4304738522

**USER ID: JVV274** (Frac Invoices Only)

COMPLETIONS ENGINEER: Ben Smiley, Denver, CO

(720) 929-6060 (Office) (936) 524-4231 (Cell)

### REMEMBER SAFETY FIRST!

RECEIVED: May. 22, 2014

Name: NBU 1022-5C-4

Location: SE NE NW Section 5 T10S R22E

**LAT:** 39.981766 **LONG:** -109.463945 **COORDINATE:** NAD83 (Surface Location)

**Uintah County, UT** 

**ELEVATIONS:** 5,188' GL 5,206' KB *Frac Registry TVD: 9,122*'

**TOTAL DEPTH:** 9.125' **PBTD:** 9.069'

**SURFACE CASING:** 9 5/8", 36# J-55 LTC @ 2,397' **PRODUCTION CASING:** 4 1/2", 11.6#, I-80 LTC @ 9,113'

Marker Joint 4,484-4,501'

#### **TUBULAR PROPERTIES:**

	BURST	COLLAPSE	DRIFT DIA.	CAPACIT	IES
	(psi)	(psi)	(in.)	(bbl./ft)	(gal/ft)
2 3/8" 4.7# L-80 tbg	11,200	11,780	1.901"	0.00387	0.1624
4 ½" 11.6# I-80 (See above)	7780	6350	3.875"	0.0155	0.6528
4 ½" 11.6# P-110	10691	7580	3.875"	0.0155	0.6528
2 3/8" by 4 ½" Annulus				0.0101	0.4227

TOPS: BOTTOMS:

1,311' Green River Top

1,637' Bird's Nest Top

2,132' Mahogany Top

4,547' Wasatch Top

7,118' Mesaverde Top 9,125' Mesaverde Bottom (TD)

**T.O.C.** @ 4650'

#### **GENERAL NOTES:**

- Please note that:
  - All stages on this procedure may or may not be completed due to low frac gradients, timing, or other possible reasons. Total stages completed can be found in the post-job-report.

7,118' Wasatch Bottom

- O CBP depth on this procedure is only to be used as a reference. This depth is subject to change as per field operations and the discretion of the wireline supervisor and field foreman.
- A minimum of 17 tanks (cleaned lined 500 bbl) of recycled water will be required. Note: Use biocide in tanks and the water needs to be at least 45°F at pump time.
- All perforation depths are from Cutter's GRlog dated 2/10/2008.
- 6 fracturing stages required for coverage.
- Hydraulic isolation estimated at **4682** based upon Cutter's CBL dated 2/10/2008.
- Procedure calls for 7 CBP's (8000 psi).
- Calculate open perforations after each breakdown. If less than 60% of the perforations appear to be open, ball out with 15% HCl.
- Pump scale inhibitor at 0.5 gpt. Remember to pre-load the casing with scale inhibitor.

<sup>\*</sup>Based on latest geological interpretation

<sup>\*\*</sup>Based on latest interpretation of CBL

- FR will be pumped at 0.3 gpt for this well. This concentration will be raised or lowered on the job at the discretion of the APC foreman per the well's treating pressure.
- 30/50 mesh Ottawa sand, Slickwater frac.
- Maximum surface pressure 6200 psi.
- If casing pressure test fails (pressure loss of 1.5% psi or more), retest for 15 minutes. If pressure loss of 1.5% more on second test, notify Denver engineers. Record in Openwells. MIRU with tubing and packer. Isolate leak by pressure testing above and below the packer. RIH and set appropriate casing leak remediation. Re-pressure test to 1000 and 3500 psi for 15 minutes each and to 6200 psi for 30 minutes (specific details on remediation should be documented in OpenWells).
- Flush volumes are the sum of slick water and acid used during displacement (include scale inhibitor as mentioned above). Stage acid and scale inhibitor if necessary to cover the next perforated interval.
- Call flush at 0 PPG @ inline densiometers. Slow to 5 bbl/min over last 10-20 bbls of flush. Flush to top perf.
- Max Sand Concentration: Mesaverde 1 ppg; Wasatch 2 ppg;
- If distance between plug and top perf of previous stage is less than 50', it is considered to be tight spacing design will over flush stage by 5 bbls (from top perf)
- TIGHT SPACING ON STAGE 1 2, & 4.

#### **Existing Perforations:**

Zone	Тор	Btm	spf	Shots	Date	Reason
MESA VERDE	7250	7252	3	6	02/23/2009	PRODUCTION
MESA VERDE	7293	7296	3	9	02/23/2009	PRODUCTION
MESA VERDE	7410	7413	3	9	02/23/2009	PRODUCTION
MESA VERDE	7492	7497	4	20	02/23/2009	PRODUCTION
MESA VERDE	7598	7602	3	12	02/23/2009	PRODUCTION
MESA VERDE	7699	7703	3	12	02/23/2009	PRODUCTION
MESA VERDE	7735	7738	4	12	02/23/2009	PRODUCTION
MESA VERDE	7822	7824	4	8	02/23/2009	PRODUCTION
MESA VERDE	8029	8034	3	15	02/23/2009	PRODUCTION
MESA VERDE	8116	8118	3	6	02/23/2009	PRODUCTION
MESA VERDE	8160	8163	3	9	02/23/2009	PRODUCTION
MESA VERDE	8207	8210	4	12		PRODUCTION
MESA VERDE	8314	8317	3	9	02/23/2009	PRODUCTION
MESA VERDE	8418	8422	3	12	02/23/2009	PRODUCTION
MESA VERDE	8454	8458	3	12	02/23/2009	PRODUCTION
MESA VERDE	8472	8474	4	8	02/23/2009	PRODUCTION
MESA VERDE	8544	8548	3	12	02/23/2009	PRODUCTION
MESA VERDE	8611	8616	3	15	02/23/2009	PRODUCTION
MESA VERDE	8641	8646	3	15	02/23/2009	PRODUCTION
MESA VERDE	8706	8711	3	15	02/23/2009	PRODUCTION
MESA VERDE	8732	8734	3	6	02/23/2009	PRODUCTION
MESA VERDE	8762	8765	3	9	02/23/2009	PRODUCTION
MESA VERDE	8819	8822	4	12		PRODUCTION
MESA VERDE	8935	8938	3	9	02/23/2009	PRODUCTION
MESA VERDE	8970	8974	4	16	02/23/2009	PRODUCTION
MESA VERDE	9016	9020	4	16	02/23/2009	PRODUCTION

#### **Relevant History:**

2/24/2009: Originally completed in Mesaverde formation (7 stages) with  $\sim 691,162$  gallons of

Slickwater, 604,320 lbs of 30/50 Ottawa Sand and 35,080 lbs of

20/40 Resin coated sand.

12/30/2013: Well TA'd. Cement Plug(s) @ 7200' and 4660'

#### **H2S History:**

Location Name	WINS No. (wel	Production Date	Gas (avg mcfl	Water (avg bb	Oil (avg bbl/day)	Avg. BOE/day	LGR (bbl/Mmcf)	Max H2S Sep.	Separator H2.	Tank H2S (lbs)	Production Year
NBU 1022-5C-4	95336	1/31/2010	1020.74	27.23	3.68	173.80	30.28				2010
NBU 1022-5C-4	95336	2/28/2010	936.68	26.96	3.64	159.76	32.68	0.00	0.00	0.00	2010
NBU 1022-5C-4	95336	3/31/2010	934.26	23.29	2.26	157.97	27.35	5.00	0.42	0.00	2010
NBU 1022-5C-4	95336	4/30/2010	790.87	8.10	1.47	133.28	12.10				2010
NBU 1022-5C-4	95336	5/31/2010	895.32	42.19	2.10	151.32	49.47				2010
NBU 1022-5C-4	95336	6/30/2010	824.07	21.00	1.83	139.18	27.71				2010
NBU 1022-5C-4	95336	7/31/2010	810.68	22.74	0.97	136.08	29.25				2010
NBU 1022-5C-4	95336	8/31/2010	826.81	32.32	2.71	140.51	42.37				2010
NBU 1022-5C-4	95336	9/30/2010	758.43	21.07	1.23	127.64	29.40				2010
NBU 1022-5C-4	95336	10/31/2010	704.65	23.23	1.74	119.18	35.43				2010
NBU 1022-5C-4	95336	11/30/2010	696.83	17.83	2.07	118.21	28.56				2010
NBU 1022-5C-4	95336	12/31/2010	664.19	16.52	2.06	112.76	27.97				2010
NBU 1022-5C-4	95336	1/31/2011	578.42	11.32	1.35	97.76	21.92	0.00	0.00	0.00	2011
NBU 1022-5C-4	95336	2/28/2011	597.82	14.04	2.29	101.92	27.30	0.00	0.00	0.00	2011
NBU 1022-5C-4	95336	3/31/2011	542.97	11.58	1.77	92.27	24.60				2011
NBU 1022-5C-4	95336	4/30/2011	483.60	5.97	1.60	82.20	15.65	2.00	0.09	0.00	2011
NBU 1022-5C-4	95336	5/31/2011	723.94	49.81	3.19	123.85	73.21	2.00	0.00	0.00	2011
NBU 1022-5C-4	95336	6/30/2011	635.07	23.93	0.80	106.64	38.95				2011
NBU 1022-5C-4	95336	7/31/2011	612.39	23.48	2.23	104.29	41.98				2011
NBU 1022-5C-4	95336	8/31/2011	585.90	23.77	1.10	98.75	42.45				2011
NBU 1022-5C-4	95336	9/30/2011	555.57	16.90	0.07	92.66	30.54				2011
NBU 1022-5C-4	95336	10/31/2011	530.68	16.00	0.71	89.16	31.49				2011
NBU 1022-5C-4	95336	11/30/2011	519.83	16.23	0.57	87.21	32.32				2011
NBU 1022-5C-4	95336	12/31/2011	505.90	11.61	0.71	85.03	24.36	0.00	0.00	0.00	2011
NBU 1022-5C-4	95336	1/31/2012	485.77	13.03	0.19	81.16	27.23	0.00	0.00	0.00	2012
NBU 1022-5C-4	95336	2/29/2012	452.69	13.00	0.19	76.00	29.94	0.00	0.00	0.00	2012
NBU 1022-5C-4	95336	3/31/2012	293.81	8.32	0.26	49.23	29.21	0.00	0.00	0.00	2012
NBU 1022-5C-4	95336	4/30/2012	703.83	70.83	1.87	119.17	103.29	29.00	1.83	0.00	2012
NBU 1022-5C-4	95336	5/31/2012	646.55	28.81	1.48	109.24	46.85	8.00	0.46	0.00	2012
NBU 1022-5C-4	95336	6/30/2012	604.33	24.27	0.43	109.24	40.87	0.00	0.40	0.00	2012
NBU 1022-5C-4 NBU 1022-5C-4	95336	7/31/2012	576.87	15.26	0.43	96.95	27.85				2012
NBU 1022-5C-4	95336	8/31/2012	557.52	21.42	0.77	93.69	39.81				2012
NBU 1022-5C-4	95336	9/30/2012	542.60	15.03	0.70	91.13	29.00	8.00	0.39	0.00	2012
NBU 1022-5C-4 NBU 1022-5C-4	95336	10/31/2012	542.60	14.71	0.77	89.94	28.94	0.00	0.39	0.00	2012
NBU 1022-5C-4	95336	11/30/2012	518.80	16.43	0.77	86.83	32.38				2012
NBU 1022-5C-4	95336	12/31/2012	508.03			85.12					2012
NBU 1022-5C-4	95336	1/31/2013	499.55	12.16 17.16	0.45 0.61	83.87	24.83 35.58	0.00	0.00	0.00	2012
NBU 1022-5C-4 NBU 1022-5C-4	95336	2/28/2013	489.55			80.24		0.00	0.00	0.00	2013
NBU 1022-5C-4 NBU 1022-5C-4				15.86	0.21		33.47				
NBU 1022-5C-4 NBU 1022-5C-4	95336 95336	3/31/2013 4/30/2013	433.19 489.43	9.13 15.13	0.23	72.42 81.77	21.60				2013 2013
					0.20		31.33				
NBU 1022-5C-4	95336	5/31/2013	418.00	15.74	0.42	70.09	38.66				2013
NBU 1022-5C-4	95336	6/30/2013	472.50	12.87	0.07	78.82	27.37				2013
NBU 1022-5C-4	95336	7/31/2013	498.16	22.52	0.35	83.38	45.91				2013
NBU 1022-5C-4	95336	8/31/2013	480.35	15.52	0.32	80.38	32.97				2013
NBU 1022-5C-4	95336	9/30/2013	467.60	15.10	0.40	78.33	33.15				2013
NBU 1022-5C-4	95336	10/31/2013	446.61	12.23	0.00	74.44	27.37				2013
NBU 1022-5C-4	95336	11/30/2013	454.27	17.93	0.30	76.01	40.14				2013
NBU 1022-5C-4	95336	12/31/2013	259.32	5.71	0.16	43.38	22.64	0.00	0.00	0.00	2013
NBU 1022-5C-4	95336	1/31/2014	0.00	0.00	0.00	0.00					2014
NBU 1022-5C-4	95336	2/28/2014	0.00	0.00	0.00	0.00					2014

<u>PROCEDURE</u>: (If using any chemicals for pickling tubing or H2S Scavenging, have MSDS for all chemicals prior to starting work.)

- 1. MIRU. ND WH, NU BOP's and test.
- 2. P/U 2 & 3/8" tbg and a mill and C/O CBP @ 4660' and 7200'. Continue to cleanout to 7300' (70' below proposed CBP depth). Circulate well clean and POOH.
- 3. Set 8000 psi CBP at ~ 7230'. ND BOPs and NU frac valves Test frac valves and casing to to 6200 psi for 15 minutes; if pressure test fails contact Denver engineer and see notes above. Lock OPEN the Braden head valve. Flow from annulus will be visually monitored

throughout stimulation. If release occurs, stimulation will be shut down. Well conditions will be assessed and actions taken as necessary to secure the well. UDOGM will be notified if a release to the annulus occurs.

- 4. Pressure test frac lines to max surface pressure + 1000 psi for 15 minutes. Pressure loss should be less than 10% to be considered acceptable. Check and correct for existing leaks.
- 5. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	6976	6977	3	3
<b>MESAVERDE</b>	6994	6995	3	3
<b>MESAVERDE</b>	7201	7206	3	15

6. Breakdown perfs and establish injection rate (<u>include scale inhibitor in fluid</u>). Spot 250 gals of 15% HCL and let soak 5-10 min. Fracture as outlined in Stage 1 on attached listing. Under-displace to ~6976' and trickle 250gal 15% HCL w/ scale inhibitor in flush . **NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS** 

7. Set 8000 psi CBP at ~6951'. Perf the following 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	6724	6725	3	3
WASATCH	6794	6795	3	3
WASATCH	6842	6843	3	3
WASATCH	6877	6878	3	3
WASATCH	6896	6898	3	6
WASATCH	6926	6928	3	6

- 8. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 2 on attached listing. Under-displace to ~6724' and trickle 250gal 15% HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS
- 9. Set 8000 psi CBP at ~6691'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	6458	6459	3	3
WASATCH	6477	6478	3	3
WASATCH	6516	6518	3	6
WASATCH	6556	6557	3	3
WASATCH	6564	6565	3	3
WASATCH	6659	6661	3	6

- 10. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 3 on attached listing. Under-displace to ~6458' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 11. Set 8000 psi CBP at ~6374'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spt	# of shots
WASATCH	6123	6124	3	3
WASATCH	6187	6188	3	3
WASATCH	6220	6221	3	3
WASATCH	6240	6241	3	3
WASATCH	6299	6300	3	3
WASATCH	6312	6313	3	3
WASATCH	6332	6333	3	3
WASATCH	6343	6344	3	3

12. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 4 on attached listing. Under-displace to ~6123' and trickle 250gal 15% HCL w/ scale inhibitor in flush. NOTE: TIGHT SPACING THIS STAGE, OVERFLUSH BY 5BBLS

13. Set 8000 psi CBP at ~6090'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	5905	5906	3	3
WASATCH	5920	5921	3	3
WASATCH	5951	5952	3	3
WASATCH	5963	5964	3	3
WASATCH	5978	5979	3	3
WASATCH	6057	6060	3	9

- 14. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 5 on attached listing. Under-displace to ~5905' and trickle 250gal 15% HCL w/ scale inhibitor in flush.
- 15. Set 8000 psi CBP at ~5851'. Perf the following with 3-1/8" gun, 19 gm, 0.40" hole:

Zone	From	To	spf	# of shots
WASATCH	5650	5654	4	16
WASATCH	5827	5829	4	8

- 16. Breakdown perfs and establish injection rate. Fracture as outlined in Stage 6 on attached listing. Under-displace to ~5650' andflush only with recycled water.
- 17. Set 8000 psi CBP at~5595'.
- 18. ND Frac Valves, NU and Test BOPs.
- 19. TIH with 3 7/8" bit, pump open sub, SN and tubing.
- 20. Drill 6 plugs and clean out to a depth of 7220' (~ 14' below bottom perfs).
- 21. Shift pump open bit sub and land tubing at 6634'. Flow back completion load. RDMO.
- 22. MIRU, POOH tbg and POBS. TIH with POBS.
- 23. Drill last plug @ 7230' clean out to PBTD at 9069'. Shear off bit and land tubing at ± '. This well WILL be commingled at this time. NOTE: If the CBP between the initial completion and the recompleted sands has been in the well for more than 30 calendar days from the beginning of flowback for the recompletion, a sundry will need to be filed with the state. Contact the Regulatory group to file the sundry prior to commencing work.
- 24. Clean out well with foam and/or swabbing unit until steady flow has been established from completion.
- 25. Leave surface casing valve open. Monitor and report any flow from surface casing. RDMO

Completion Engineer

Ben Smiley: 936/524-4231, 720/929-6060

Production Engineer

Mickey Doherty: 406/491-7294, 435/781-9740

Ronald Trigo: 352/213-6630, 435/781-7037

Brad Laney: 435/781-7031, 435/828-5469

Boone Bajgier: 435/781/7096, 713/416/4816

Heath Pottmeyer: 740/525-3445, 435/781-9789

Anqi Yang: 435/828-6505, 435/781-7015

Completion Supervisor Foreman

Jeff Samuels: 435/828-6515, 435/781-7046

Completion Manager

Jeff Dufresne: 720/929-6281, 303/241-8428

Vernal Main Office

435/789-3342

Emergency Contact Information—Call 911

Vernal Regional Hospital Emergency: 435-789-3342

Police: (435) 789-5835

Fire: 435-789-4222

#### Acid Pickling and H2S Procedures (If Required)

#### \*\*PROCEDURE FOR PUMPING ACID DOWN TBG

WHEN FINDING SCALE IN TUBING THAT IS ACID SOLUBLE, ENSURE THAT PLUNGER EQUIPMENT IS REMOVED AND ABLE TO PUMP DOWN TBG. INSTALL A 'T' IN PUMP LINE W/2" VALVE THAT NALCO CAN TIE INTO. HAVE 60 BBLS 2% KCL MIXED W/ 10-15 GAL H2S SCAVENGER IN RIG FLAT TANK. (WE USED THE RIG FLAT TANK FOR MIXING CHEMICAL SO WE DIDN'T HAVE THE CHEMICAL IN ALL FLUIDS ON LOCATION, ONLY WHAT WE NEEDED TO PUMP DOWN HOLE)

- 1. PUMP 5-10 BBLS 2% KCL DOWN TBG (NALCO CANNOT PUMP AGAINST PRESSURE)
- 2. NALCO WILL PUMP 3 DRUMS HCL (31%) INTO PUMP LINE.
- 3. FLUSH BEHIND ACID WITH 10-15 BBL 2% KCL
- 4. PUMP 2—30 BBL 2% W/ H2S SCAVENGER DOWN TBG.
- 5. PUMP REMAINDER OF 2% W/ H2S SCAVENGER DOWN CASING AND SHUT WELL IN FOR MINIMUM OF 2 HRS.
- 6. OVER DISPLACE DOWN TBG AND CSG TO FLUSH ACID AND SCAVENGER INTO FORMATION
- 7. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

#### \*\* PROCEDURE FOR PUMPING H2S SCAVENGER WITHOUT ACID

PRIOR TO RIG MOVING ON OR AS RIG PULLS ONTO LOCATION. TEST CASING, TUBING AND SEPARATOR FOR H2S. IF FOUND MAKE SURE THAT PLUNGER SYSTEM IS REMOVED (IT IS POSSIBLE TO PUMP AROUND PLUNGERS BUT SOME WILL HAVE A STANDING VALVE IN SEATING NIPPLE).

- 1. MIX 10-15 GAL H2S SCAVENGER WITH 60-100 BBL 2% KCL IN RIG FLAT TANK.
- 2. PUMP 25 BBLS MIXTURE DOWN TUBING AND REST DOWN CASING. SHUT WELL IN FOR 2 HOURS.
- 3. IF WELL HAS PRESSURE AFTER 2 HOURS RETEST CASING AND TUBING FOR H2S.
- 4. FLUSH TUBING AND CASING PUSHING H2S SCAVENGER INTO FORMATION.
- 5. MONITOR TUBING FOR FLOW AND CASING FOR H2S NOW AS POOH W/ TUBING.

<sup>\*\*</sup> As per APC standard operating procedure, APC foreman will verify ALL volumes pumped and record on APC Volume Report Form

Service Compar	v Supplied Cl	nemicals - Job Totals
COLVICE COMPA	iy Cappiica Ci	iorriiodio oob rotalo

Friction Reducer	88	gals @	0.3	GPT
Surfactant	294	gals @	1.0	GPT
Clay Stabilizer	0	gals @	0.0	GPT
15% Hcl	1500	gals @	250	gal/stg
Iron Control for acid	8	gals @	5.0	GPT of acid
Surfactant for acid	3	gals @	2.0	GPT of acid
Corrosion Inhibitor for acid	9	gals @	6.0	GPT of acid

#### Third Party Supplied Chemicals Job Totals - Include Pumping Charge if Applicable

•	Scale Inhibitor	147	gals pumped	0.5	GPT (see schedule)
	Biocide	88	nals @	0.3	GPT

8

| Scale<br>Inhib.,   | 2  | ю  | ı, cı  | 2 0   | 0 0  | O 10  
  | 22   |  |  |  |  
   |  | 2 6  | 4                                     | η ς  | 00   | 00  
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   | 0 0  | 0  | 73   |  |   
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Footage from			
  |  |  | bs sand/ft   | 52   | l  
   |  |  |                                       |  |  |   
  |  |  | 4)/60  | 33   |  
   |  |  |  |  |   
   |  |  |  |  | lbs sand/ft<br>84   
  |
| Cum. Sand          |  | 0  | 4,351  | 11,188  | 11,188   | 19,890  
  | 19,890   |  |  | 3,951  |  
   |  | 0008   | 21,440                                | 21,440   |  | 21,440  
  |  |  | 1023   | - 1  |  
   |  | 12.750   | 34.170   | 34,170   |   
   | 34,170   |  |  |  | 670   
  |
| _                  |  | 0  | 4,351  | 6,837   | 0 0  | 8,702   
  |  |  | 009  | BP depth   | |
   |  | 0008   | 13,440                                |  |  |   
  |  |  | 6  | BP depth   |  
   |  | 12.750   | 21.420   |  |   
   |  |  |  |  | t 800<br>CBP depth 6.374  
  |
| Sand<br>% of frac  |  | 0.0%   | 21.9%  | 34.4%   | 0.0%   | 43.8%   
  |  |  | gal/ft   |  | |
   |  | 37.3%  | 62.7%                                 |  |  |   
  |  |  | 4/100  | -0-  |  
   |  | 0.0%   | 62.7%  |  |   
   |  |  |  |  | gal/#   
  |
|                    |  | 15.0%  | 28.3%  | 28.3%   |  | 28.3%   
  |  |  |  | 926,9  | |
   |  | 15.0%  | 35.0%                                 |  |  |   
  |  |  |  | 6,724  |  
   |  | 15.0%  | 35.0%  |  |   
   |  |  |  |  | 6.458   
  |
| Cum Vol            | 108  | 234  | 471  | 707   | 707  | 944   
  | 1,053  |  |  | Flush depth  | 0  
   |  | 396  | 610                                   | 714  |  | 717   
  | <u>+</u>   |  |  | Flush depth  | C  
   | •  | 146  | 971  | 1,072  |   
   |  | 1,072  |  |  | Flush depth 6.458   
  |
| Volume             |  | 125  | 237  | 237   | 0 0  |   
  |  |  |  |  | 0  
   | i  |  |                                       |  |  | 105   
  | 3  |  |  |  | c  
   | •  |  |  |  |   
   |  | 100  |  |  |   
  |
| Cum Vol            | 4,554  | 9,819  | 19,764   | 29,764  | 29,709   | 39,654  
  | 44,208<br>44,208   |  | 35,100   |  | 0  
   |  | 3,840  | 25,600                                | 29,989   |  | 20 080  
  | 29,909   |  | 25,600   |  | C  
   | •  | 6,120  | 40,800   | 45,016   |   
   |  | 45,016   |  | 40,800   |   
  |
| Volume             | 4,554  | 5,265  | 9,945  | 9,945   | 0 (  | 9,945   
  | 4,554  |  | lume   |  | |
   |  | 3,840  | 8,960                                 | 4,389  |  |   
  |  |  | lume   |  |  
   |  | 6,120  | 14.280   | 4,216  |   
   |  |  |  | lume   |   
  |
| nal Fluid          | Slickwater   | Slickwater   |  |   |  |   
  |  | :  | Sand laden Vo  |  | Slickwater   
   |  |  |                                       | Slickwater   |  |   
  |  |  | Sand laden Vo  |  | Slickwater   
   |  |  |  |  | Slickwater  
   |  |  |  | Sand laden Vo  |   
  |
|                    |  |  |  |   |  |   
  |  |  |  | ł  | H  
   |  | 0.25   | -                                     |  |  |   
  |  |  |  | +  |  
   |  | 25   | 7.5  | -  |   
   |  |  |  |  |   
  |
|                    | Pre-Pad & Pump-in test   | ISIP and 5 min ISIP<br>Slickwater Pad  | Slickwater Ramp  | amp   |  |   
  | Flush (4-1/2)<br>ISDP and 5 min ISDP   |  |  | About amounting (min)  | Pump-in test   
   | ISIP and 5 min ISIP  |  |                                       | Flush (4-1/2)  | 2  |   
  |  |  |  |  | << Above pump time (min) Pump-in test  
   | ISIP and 5 min ISIP  |  |  |  | ISDP and 5 min ISDP   
   |  |  |  |  |   
  |
|                    | Varie  | 3 0  | 50   | 20  | 20   | 20  
  | 20   |  |  | 74   | Varie  
   |  |  |                                       |  |  |   
  |  |  |  | <b>22</b>  | 3 Varied   
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  |
|                    | 7  | 6995   |  |   |  |   
  |  |  |  | of Perfs/si  | 6725   
   | 6795   | 6843   | 8689                                  | 6928   |  |   
  |  |  |  | of Perfs/st  | 6429   
   | 6478   | 6518   | 6565   | 1999   |   
   |  |  |  |  | # of Perfs/stage  
  |
| Perfs<br>Top ft Bo | 9769   | 6994   |  |   |  |   
  |  |  |  | #  | 6724   
   | 6794   | 6842   | 9689                                  | 9269   |  |   
  |  |  |  | #  | 6458   
   | 6477   | 6516   | 6564   | 6999   |   
   |  |  |  |  | *   
  |
|                    | WASATCH  | MESAVERDE<br>MESAVERDE   | MESAVERDE  | MESAVERDE   | MESAVERDE  | MESAVERDE   
  | MESAVERDE<br>MESAVERDE   | MESAVERDE<br>MESAVERDE   | MESAVERDE  |  | 2 WASATCH  
   | WASATCH  | WASATCH  | WASATCH                               | WASATCH  | WASATCH  | WASATCH   
  | WASATCH  | WASATCH<br>WASATCH   | WASATCH  |  | WASATCH  
   | WASATCH  | WASATCH  | WASATCH  | WASATCH  | WASATCH   
   | WASATCH  | WASATCH  | WASATCH  | WASATCH  |   
  |
|                    | Perfs Rate Fluid Initial Final Fluid Volume Cum Vol Volume Cum Vol Fluid Sand Cum. Sand Footage from Ton ff Rot. ff SPF Holes RPM Two non one cals als RBLs Rels wortrac libs libs CBP to Fluid Cum. | Perfs A Sand Sand Cum. Sand Final Final Final Fluid Volume Cum Vol Cum Vol Cum Vol Cum Vol Cum Vol Cum Vol Cum Sand Cum. Sand Footage from Top, ft. Bot., ft SPF Holes BPM Type ppg pg gals gals BBLs BBLs % of frac Ibs Ibs CBP to Fluid Sand Cum. Sand Footage from Sand Footage from Sand Fluid Fluid Fluid Sand Cum. Sand Fluid Fluid Fluid Sand Cum. Sand Fluid Fluid Fluid Fluid Fluid Sand Cum. Sand Fluid Fluid Fluid Fluid Fluid Fluid Fluid Fluid Sand Cum. Sand Fluid Flu | Perfs   Perf | Perfs   Rate   Fluid   Initial   Final   Fluid   Volume   Cum Vol   Fluid   Sand   Cum. | Perfs   Perf | Perfs   Perf | Perfs   Perf | Perfs   Perf | Perfs   Perfs   Perfs   Pulse   Puls | Perfs   Perf | Perts   Pert | Perfs   Perf | Ports   Port | Top, th   Bot, th   SPF   Holes   BPM | Perfs   Perf | Perfs   Perf | Perfs   Perf | Perfs   Perf | Perfs   Perf | Perfs   Free   Free | Feet State   Found   Found | Perfs   Perfs   Rate   Fluid   Fluid | Perify   P | Perifs   P | Perist   P | Perfs   Perfs   Rate   Fluid   Fluid | Perfs   Perfs   Rabe   Rabe | Perfs   Rabe   Final   Final | Perfs   Perf | Perfs   Perf | Perfect   Perf | Perfect   Perf |

gals BBLs
0
11,280 11,280 37,600 48,880 26,320 75,200 3,997 79,197
79,197
75,200
70,200 26,200 14,140 40,400 3,855 44,255
44,255
40,400
0 777
7,740 7,740 25,800 33,540
18,060
55,288
51,600
Total Fluid 297,953

stages gals

3,688

Total Stages Last Stage Flush

NBU 1022-5C4 Perforation and CBP Summary

		Pei	rforations					
Stage	Zones	Top, ft	Bottom, ft	SPF	Holes	Fra	acture Cover	age
1	WASATCH	6976	6977	3	3	697	6 to	7230.5
	MESAVERDE	6994	6995	3	3			
	MESAVERDE	7201	7206	3	15			
	MESAVERDE							
	MESAVERDE						1	
	MESAVERDE							
	MESAVERDE							
	MESAVERDE							
	# of Perfs/stage				21	CBP DEPTH	6,951	
2	WASATCH	6724	6725	3	3	672	4 to	6935
	WASATCH	6794	6795	3	3			
	WASATCH	6842	6843	3	3			
	WASATCH	6877	6878	3	3			
	WASATCH	6896	6898	3	6			
	WASATCH	6926	6928	3	6			
	WASATCH							
	WASATCH							
	# of Perfs/stage				24	CBP DEPTH	6,691	
3	WASATCH	6458	6450	3	3	645	g to	6670
3	WASATCH WASATCH	6477	6459 6478	3	3	645	8 to	6670
	WASATCH	6516	6518	3	6		+	
	WASATCH	6556	6557	3	3		+	
	WASATCH	6564	6565	3	3		+	
	WASATCH	6659	6661	3	6		+	
	WASATCH	0039	0001	3	0			
	WASATCH						+	
	WASATCIT							
	# of Perfs/stage				24	CBP DEPTH	6,374	
	,							
4	WASATCH	6123	6124	3	3	612	3 to	6355
	WASATCH	6187	6188	3	3			
	WASATCH	6220	6221	3	3			
	WASATCH	6240	6241	3	3			
	WASATCH	6299	6300	3	3			
	WASATCH	6312	6313	3	3			
	WASATCH	6332	6333	3	3			
	WASATCH	6343	6344	3	3			
	# of Perfs/stage				24	CBP DEPTH	6,090	
5	WASATCH	5905	5906	3	3	590	5 to	6073
	WASATCH	5920	5921	3	3	111		
	WASATCH	5951	5952	3	3			
	WASATCH	5963	5964	3	3			
	WASATCH	5978	5979	3	3			
	WASATCH	6057	6060	3	9			
	WASATCH							
	WASATCH							
	# of Perfs/stage				24	CBP DEPTH	5,851	
	MAGATOLI	5050	505.4	4	40	500	ol 4-	5054
6	WASATCH WASATCH	5650 5827	5654 5829	4	16 8		8 to	5851
	WASATCH	5627	5629	4	8		1	<del> </del>
	WASATCH						1	<del> </del>
	WASATCH						1	<del> </del>
	WASATCH					<del>                                     </del>	1	<del> </del>
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[	WASATCH						+	<del> </del>
						L		
	WASATCH			1				
					24	CBD DEDTU	5 505	
	# of Perfs/stage				24	CBP DEPTH	5,595	
					24	CBP DEPTH	5,595	

Sundry Number: 60919 API Well Number: 43047385220000

	STATE OF UTAH			FORM 9
ı	DEPARTMENT OF NATURAL RESOU DIVISION OF OIL, GAS, AND N		i	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195
SUNDR	RY NOTICES AND REPORTS	S ON	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significant reenter plugged wells, or to drill hori n for such proposals.			7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: NBU 1022-5C-4
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047385220000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		<b>NE NUMBER:</b> 9 720 929-6	9. FIELD and POOL or WILDCAT: 1NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1269 FNL 2606 FWL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN։ 05 Township։ 10.0S Range։ 22.0E Me	eridian:	S	STATE: UTAH
11. CHECI	K APPROPRIATE BOXES TO INDIC	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		LITER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS		HANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	RACTURE TREAT	☐ NEW CONSTRUCTION
1/21/2015	OPERATOR CHANGE	П	LUG AND ABANDON	PLUG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR		ENT OR FLARE	WATER DISPOSAL
DRILLING REPORT	WATER SHUTOFF		I TA STATUS EXTENSION	APD EXTENSION
Report Date:			I TA STATUS EXTENSION	
	WILDCAT WELL DETERMINATION		OTHER	OTHER:
The NBU 1022-50 following a tem	COMPLETED OPERATIONS. Clearly sho C-4 well was returned to p nporary abandonment. Plea ns summary report for deta	roduc ase se	ction on 1/21/2015 ee the attached	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY February 17, 2015
NAME (DI FACE DEINT)	DUANE YOU	MDER	TITLE	
NAME (PLEASE PRINT) Kristina Geno	<b>PHONE NUM</b> 720 929-6824	MBER	TITLE Regulatory Analyst	
SIGNATURE N/A			<b>DATE</b> 2/17/2015	

RECEIVED: Feb. 17, 2015

					U	S ROC	KIES RI	EGION					
					Opera	ition S	Summa	ry Report					
Well: NBU 1022	-5C-4			Spud Cor	nductor: 1	1/6/2009		Spud date: 1/7	/2009				
Project: UTAH-L	JINTAH			Site: NBL	J 1022-5C	PAD		Rig name no.: MILES-GRAY 1/1					
Event: ABANDO	NMENT			Start date	: 12/29/2	014			End date: 1/14/2015				
Active datum: R Level)	KB @5,206	6.00usft (ab	ove Mean S	ea	UWI: 0/	10/S/22/E	E/5/0/NEN	W/6/PM/N/1,269	.00/W/0/2,606.00/0/0				
Date		ime rt-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation				
12/15/2014	7:00	-							REBUILD PROD FACILITIES TO RETURN WELL TO PRODUCTION				
1/12/2015	7:00	- 7:15	0.25	ABANDT	48		Р		JSA-SAFETY MEETING				
	7:15	- 8:30	1.25	ABANDT	30	Α	Р		MIRU MILE WELL SERVICE RIG #1				
		- 10:30	2.00	ABANDT	30	F	Р		N/D WH N/U BOPS, FUNCTION BOP, R/U TBG EQUIP,				
	10:30	- 14:00	3.50	ABANDT	31	I	Р		P/U 3 7/8" MILL AND POBS RIH W/ 2 3/8" J-55 TBG NEW, RIH 137 JTS TAG CEMENT TOP @ 4321',				
	14:00	- 17:30	3.50	ABANDT	44	Α	Р		R/U POWER SWIVEL, PRESSURE TEST CSG AND BOP TO 2000# OK, ESTBG CIRC, MILL OUT CEMENT FROM 4321' TO 4416', CIRC WELL CLEAN, R/D SWIVEL, DRAIN PUMP LINES, P/O 2 JTS, SHUT WELL IN, SDFN				
1/13/2015	7:00	- 7:15	0.25	ABANDT	48		Р		JSA-SAFETY MEETING				
	7:15	- 12:00	4.75	ABANDT	44	Α	Р		R/U SWIVEL, MILL OUT CEMENT FROM 4416' TO 4620', FELL FREE RIH TO 4750', CIRC WELL CLEAN,				
	12:00	- 14:00	2.00	ABANDT	31	I	Р		RIH W/ 2 3/8" J-55 TBG, TAG CEMENT AT 7105', R/U SWIVEL				
	14:00		4.00	ABANDT	44	A	Р		ESTB CIRC W/ FOAM UNIT, MILL OUT CEMENT FROM 7105' TO 7200', MILL OUT 8K CBP IN 5 MIN W/ 300# DIFF, RIH TO 7260', CIRC WELL CLEAN. R/D SWIVEL, SHUT WELL IN DRAIN UP PUMP AND LINES, SDFN,				
1/14/2015		- 7:15	0.25	ABANDT	48		Р		JSA-SAFETY MEETING				
		- 9:00	1.75	ABANDT	31	I	Р		1600# ON CSG, BLEED DOWN TO PIT, RIH W/ 2 3/8" J-55 TBG TAG SCALE @ 8717', R/U SWIVEL				
	9:00	- 13:00	4.00	ABANDT	44	D	Р		ESTB CIRC W/ FOAM UNIT, C/O SCALE FROM 8717' TO 9064' PBTD, CIRC WELL CLEAN, R/D POWER SWIVEL,				
	13:00	- 18:00	5.00	ABANDT					P/O LAY DN 14 JTS ON TRAILER, LAND TBG W/ 275 JTS 2 3/8" J-55 TBG, EOT @ 8692.53', N/D BOPS, WELL STARTED FLOWING OUT TBG, PUMP 70 BBLS WTR DN TBG TO CONTROL WELL, N/U WH, SITP 400#, SICP 500#, R/D UNIT PREPARE TO MOVE OFF LOC,				
									KB = 18.00' HANGER = .83' 275 JTS 2 3/8" J-55 TBG = 8671.50' XN-NIPPLE NOTCH, 1.875"= 2.20'  EOT = 8692.53'				
									315 JTS 2 3/8" J-55 TBG DELV, 275 JTS 2 3/8" J-55 TBG USED 40 JTS 2 3/8" J-55 TBG TRANSFER TO 5C				

2/17/2015 11:01:20AM 1

Sundry	Number:	60919 <i>7</i>	APT We	<u>,                                    </u>	Iumbe	r: 4	30473852	20000
				U	S ROC	KIES R	EGION	
				Opera	tion S	Summa	ary Report	
Well: NBU 1022-	-5C-4		Spud Co	nductor: 1	1/6/2009		Spud date: 1/7/2	009
Project: UTAH-U	INTAH		Site: NBL	J 1022-50	PAD			Rig name no.: MILES-GRAY 1/1
Event: ABANDO	NMENT		Start date	e: 12/29/2	014			End date: 1/14/2015
Active datum: RI	KB @5,206.00usft (ab	oove Mean Se	a	UWI: 0/	10/S/22/E	E/5/0/NEN	W/6/PM/N/1,269.0	0/W/0/2,606.00/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
1/23/2015	12:00 - 15:00	3.00		37	A	Р		JSA: GAS ON LOCATION  MOVED IN CASED HOLE SOLUTIONS RU SAME RIH WITH 1 9/16" PERF GUN 4 SPF TAGGEG @ 8674 EOT 8692, PERFED TBG @ 8659-8661 4 SPF, {2-2' GUNS} POOH, RD WIRE LINE SWI

2/17/2015 11:01:20AM 2

RECEIVED: Feb. 17, 2015

Sundry Number: 60918 API Well Number: 43047385220000

		FORM 9				
ı	5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-01195					
SUNDR	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:					
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	7.UNIT or CA AGREEMENT NAME: NATURAL BUTTES					
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 1022-5C-4					
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	9. API NUMBER: 43047385220000					
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 802		ONE NUMBER: 720 929-6	9. FIELD and POOL or WILDCAT: 6 1NATERAL BUTTES		
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1269 FNL 2606 FWL		COUNTY: UINTAH				
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NENW Section: (	STATE: UTAH					
11. CHEC	K APPROPRIATE BOXES TO INDIC	ATE N	ATURE OF NOTICE, REPOR	T, OR OTHER D	ATA	
TYPE OF SUBMISSION			TYPE OF ACTION			
	ACIDIZE		ALTER CASING	CASING RE	PAIR	
NOTICE OF INTENT	CHANGE TO PREVIOUS PLANS		CHANGE TUBING	CHANGE W	ELL NAME	
Approximate date work will start:	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT	VELL TYPE	
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	□ F	FRACTURE TREAT	☐ NEW CONS	TRUCTION	
Date of Work Completion.	OPERATOR CHANGE	F	PLUG AND ABANDON	PLUG BACK	(	
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	☐ F	RECLAMATION OF WELL SITE	RECOMPLE	TE DIFFERENT FORMATION	
	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	TEMPORA	RY ABANDON	
DRILLING REPORT	TUBING REPAIR		/ENT OR FLARE	WATER DIS	POSAL	
Report Date:	WATER SHUTOFF		SI TA STATUS EXTENSION	APD EXTEN	ISION	
	WILDCAT WELL DETERMINATION		OTHER	OTHER:		
12. DESCRIBE PROPOSED OR	COMPLETED OPERATIONS. Clearly sho	w all pe	rtinent details including dates, d	epths, volumes, et	c.	
				Oil, Gas FOR RE	ed by the ivision of and Mining CORD ONLY ary 19, 2015	
NAME (PLEASE PRINT)	PHONE NUM	/IBER	TITLE  Regulatory Analyst			
Kristina Geno SIGNATURE	720 929-6824		Regulatory Analyst  DATE			
N/A			2/17/2015			

RECEIVED: Feb. 17, 2015

					U	S ROC	KIES R	EGION	
Operation Summary Report									
Well: NBU 1022-	-5C-4			Spud Cor	nductor: 1	1/6/2009		Spud date: 1/7/	2009
Project: UTAH-UINTAH		Site: NBU	Site: NBU 1022-5C PAD			Rig name no.: MILES-GRAY 1/1			
Event: ABANDO	Event: ABANDONMENT		Start date	Start date: 12/29/2014			End date: 1/14/2015		
Active datum: RKB @5,206.00usft (above Mean Sea Level)			ea	UWI: 0/10/S/22/E/5/0/NENW/6/PM/N/1,269.00/W/0/2,606.00/0/0					
Date		Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
12/15/2014	7:00	-	, ,					( , , , , ,	REBUILD PROD FACILITIES TO RETURN WELL TO PRODUCTION
1/12/2015	7:00	- 7:15	0.25	ABANDT	48		Р		JSA-SAFETY MEETING
	7:15	- 8:30	1.25	ABANDT	30	Α	Р		MIRU MILE WELL SERVICE RIG #1
	8:30	- 10:30	2.00	ABANDT	30	F	Р		N/D WH N/U BOPS, FUNCTION BOP, R/U TBG EQUIP,
	10:30	- 14:00	3.50	ABANDT	31	I	Р		P/U 3 7/8" MILL AND POBS RIH W/ 2 3/8" J-55 TBG NEW, RIH 137 JTS TAG CEMENT TOP @ 4321',
	14:00	- 17:30	3.50	ABANDT	44	A	Р		R/U POWER SWIVEL, PRESSURE TEST CSG AND BOP TO 2000# OK, ESTBG CIRC, MILL OUT CEMENT FROM 4321' TO 4416', CIRC WELL CLEAN, R/D SWIVEL, DRAIN PUMP LINES, P/O 2 JTS, SHUT WELL IN, SDFN
1/13/2015	7:00	- 7:15	0.25	ABANDT	48		Р		JSA-SAFETY MEETING
	7:15	- 12:00	4.75	ABANDT	44	Α	Р		R/U SWIVEL, MILL OUT CEMENT FROM 4416' TO 4620', FELL FREE RIH TO 4750', CIRC WELL CLEAN,
	12:00	- 14:00	2.00	ABANDT	31	I	Р		RIH W/ 2 3/8" J-55 TBG, TAG CEMENT AT 7105', R/U SWIVEL
1/14/2015		- 18:00 - 7:15	4.00 0.25	ABANDT	44	Α	P P		ESTB CIRC W/ FOAM UNIT, MILL OUT CEMENT FROM 7105' TO 7200', MILL OUT 8K CBP IN 5 MIN W/ 300# DIFF, RIH TO 7260', CIRC WELL CLEAN. R/D SWIVEL, SHUT WELL IN DRAIN UP PUMP AND LINES, SDFN, JSA-SAFETY MEETING
1/14/2015		- 9:00	1.75	ABANDT	31	ı	Р		
									1600# ON CSG, BLEED DOWN TO PIT, RIH W/ 2 3/8" J-55 TBG TAG SCALE @ 8717', R/U SWIVEL
	9.00	- 13:00	4.00	ABANDT	44	D	Р		ESTB CIRC W/ FOAM UNIT, C/O SCALE FROM 8717' TO 9064' PBTD, CIRC WELL CLEAN, R/D POWER SWIVEL,
	13:00	- 18:00	5.00	ABANDT					P/O LAY DN 14 JTS ON TRAILER, LAND TBG W/ 275 JTS 2 3/8" J-55 TBG, EOT @ 8692.53', N/D BOPS, WELL STARTED FLOWING OUT TBG, PUMP 70 BBLS WTR DN TBG TO CONTROL WELL, N/U WH, SITP 400#, SICP 500#, R/D UNIT PREPARE TO MOVE OFF LOC,
									KB = 18.00' HANGER = .83' 275 JTS 2 3/8" J-55 TBG = 8671.50' XN-NIPPLE NOTCH, 1.875"= 2.20'  EOT = 8692.53'
									315 JTS 2 3/8" J-55 TBG DELV, 275 JTS 2 3/8" J-55 TBG USED 40 JTS 2 3/8" J-55 TBG TRANSFER TO 5C

2/17/2015 11:01:20AM 1

Sundry	Number:	60918 <i>7</i>	APT We	<u>,                                    </u>	Iumbe	r: 4	30473852	20000
US ROCKIES REGION								
Operation Summary Report								
Well: NBU 1022-5C-4 Spud Conductor: 1/6/2009 Spud date: 1/7/2009							009	
Project: UTAH-UINTAH Site: NB			Site: NBL	SU 1022-5C PAD				Rig name no.: MILES-GRAY 1/1
Event: ABANDONMENT Start date			e: 12/29/2014				End date: 1/14/2015	
Active datum: RKB @5,206.00usft (above Mean Sea Level)				UWI: 0/10/S/22/E/5/0/NENW/6/PM/N/1,269.00/W/0/2,606.00/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD from (usft)	Operation
1/23/2015	12:00 - 15:00	3.00		37	A	Р		JSA: GAS ON LOCATION  MOVED IN CASED HOLE SOLUTIONS RU SAME RIH WITH 1 9/16" PERF GUN 4 SPF TAGGEG @ 8674 EOT 8692, PERFED TBG @ 8659-8661 4 SPF, {2-2' GUNS} POOH, RD WIRE LINE SWI

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